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ABSTRACT

This booklet describes the concepts behind the Architects-in-School Program, its objectives, roles and responsibilities. It also provides details on the Program's introduction into 62 public and private schools around the country. The residencies described are presented alphabetically by State. Each description includes information on the architect-in-residence locality and length of residency, resources, and specific activities undertaken. Comments concerning each residency are also provided. (EB)

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Architects-in-Schools 1976-1977

The Architecture/Environmental Arts Component of the Artists-in-Schools Program of the National Endowment for the Arts

Architects-in-Schools is jointly sponsored by the National Endowment for the Arts (Education Program and Architecture + Environmental Arts Program) and the participating state arts agencies.

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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The first year of the Architects-in-Schools component has been an exciting and very busy one. The response has been overwhelmingly positive across the nation, with several states establishing multiple sites.

The success of this year is to a great extent a result of the work of the Artists-in-Schools Coordinators and the state arts agencies and their extensive experience. Of course, without the architects-in-schools and the students and teachers within these schools the program could not exist. It has been exciting to see how the eclectic aspect of the discipline of architecture has found a place to blossom.

The majority of schools that have had the Architects-in-Schools component this year have asked to continue the program next year. We are encouraging this continuation. It appears from this year's results that the process of bringing understanding of the built environment to students and teachers and of insuring continuity by giving teachers the tools to carry on may be enhanced by extended residencies.

The Architects-in-Schools program has received help from various organizations. The National Environmental Education Committee of the AIA spent a great amount of time working on ways of supporting our program. Local AIA chapters have, in some cases, made substantial contributions in the form of money, time, materials and resources. The University of Pennsylvania, through its Graduate School of Fine Arts and the Department of Architecture, has supported us.

The information in this book was taken from the Documentation Evaluation Report submitted to the National Endowment for the Arts. The documentation evaluation was conducted by EFI. We are pleased that Alan Levy, FAIA, was in charge of the evaluation team. We also wish to thank Sanchez, editorial/design consultants, for the major portion of the writing and the design of this report.

Aase Eriksen

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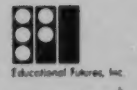

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Preface

During this year, the initial year of the Architects-in-Schools, architects-in-residence have become partners in education. They have not taught *about* architecture, although many students and teachers now may have a new awareness of the buildings around them — the high-rises, barns, houses, the schools themselves. The mission of the architect-in-school has been, rather, to teach students and teachers to see when they look; to become conscious of the impact of the environment upon them; to understand that architecture involves a process; and to become familiar with that process, which is the process of design.

Thus, there has been the conscious presentation of his tools — defining the problem, developing a program, implementing and evaluating — into the context of this country's educational system.

During this year 38 architects in 62 public and private schools around the country, in cities, suburbs and small rural towns, introduced themselves and what they do to over 40,000 students. This year has been a handshake with the built environment. This is an account of that introduction.

Architects-in-Schools Component

Architects-in-Schools is the new component of the Artists-in-Schools Program of the National Endowment for the Arts. It places architects in residencies in elementary and secondary schools throughout the country. Similar to the approach of its parent program, the Architects-in-Schools offers a sustained, cross disciplinary interaction that benefits all participants: community, teachers, students and architects.

The architects-in-residence are, in fact, not only architects, but landscape architects, planners and designers who involve students, teachers and interested community members in analyzing their surroundings and participating in the design process. In this program, the architect helps students and teachers to develop an awareness of the built environment and its relationship with the natural environment and to deepen their understanding of the impact of the built environment on their lives. He encourages their participation in the shaping of their own environment through involvement in the design process.

The emergence of this program seems particularly appropriate at this time. As education mirrors a society's values, so the Architects-in-Schools program reflects many of the current and valid directions in the fields of education and psychology, as well as those in architecture itself.

Teachers are attempting to create curriculum relevant to their students' needs and the world they live in. They are trying to shape a classroom environment that encourages students to take an active role in their own learning. They are looking for significant ways for students to learn from the non-school world and to bring that world into the classroom and the curricula. In a changing world, architects are questioning their traditional role and redefining it. Many architects are addressing the needs of the community-at-large — the invisible client — and are seeking to use their skills in meeting larger societal goals. As part of this professional reassessment, these architects perceive themselves as community resource persons, professionals enabling

others to make responsible environmental decisions.

The Architects-in-Schools program then, is a unique fusion of skills. Collaborating with teachers and students, the architect-in-residence contributes his own awareness of space and structure, the ability to analyze the surroundings, and a mastery of the process and tools of design. Although the architect may illustrate the discipline of the profession by working on projects with students and teachers, it is the process itself that is the most important legacy of the residence. The process is the key for the non-professional to make informed decisions about their environment. It is this empowerment that is the far-reaching goal of the program.

From the inception of the program, Architects-in Schools has had the following objectives:

To bring about an awareness and understanding of the built environment for itself and as it relates to the natural environment.

To use the built environment as the vehicle for understanding and teaching of the traditional academic subjects within the existing curriculum.

To be a resource to students and teachers, learning and teaching about the built environment.

To help students and teachers analyze their surroundings and to help plan and carry out changes.

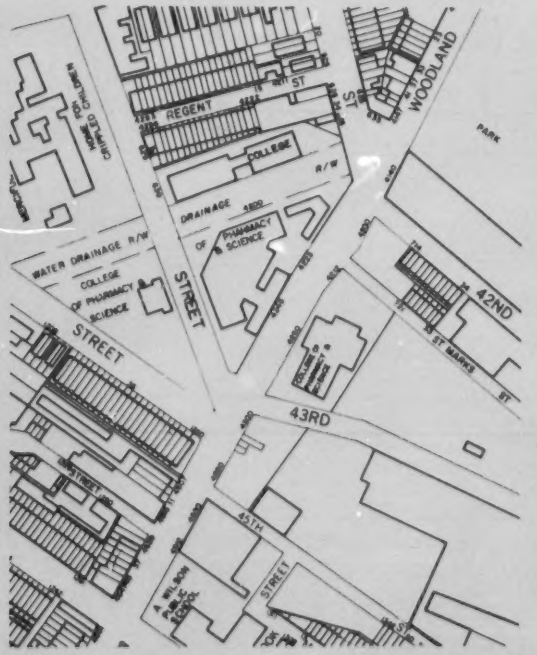
To involve students and teachers in the design process by bringing the methods of design into the school.

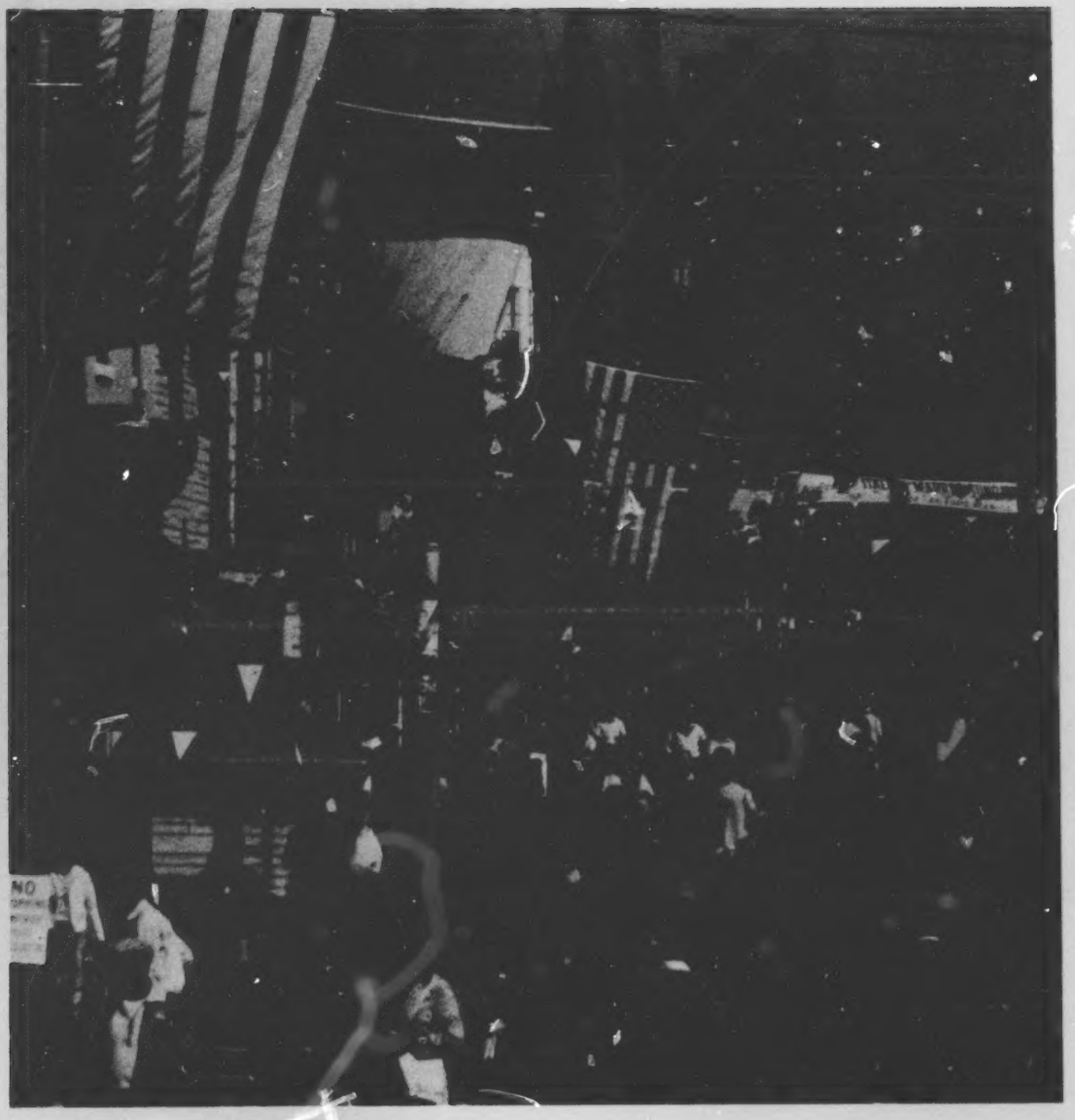
To involve oneself with students and teachers in a project with a visible product.

To develop a continuing involvement of the community and school using the built environment as a focus.

To insure continuity by passing on to the teachers some of an architect's tools, special skills and knowledge.

These objectives indicate the program's close ideological ties with built environment education.





Built environment is architecture in the broadest sense. The built environment, comprised of cities, streets, houses, parks and the spaces that connect them, has been built and landscaped by man and is the framework for all his activities and interactions. Surrounding us, it determines the shape of our lives. However pervasive its influence, the built environment remains, nonetheless, generally unperceived except as it approaches the extremes, delighting or offending us. Everyone needs to be awakened to what is around him, to observe the qualities and interrelationships of the colors, textures, noises, objects and spaces that are part of everyday life. This is the first step in understanding the environment and essential to participating in effective environmental change.

Young people, in particular, must begin to think about the functions of the built environment, how it works and how it influences attitudes and activities. As their understanding grows, they will begin to use the environment to its fullest and will participate intelligently in improving it. They will begin to think about how an environment that is responsive to their own needs and those of others can be created. This is the essence of built environment education. It is a point of view, a series of understanding — not a new discipline — that fits into any subject matter already existing in the schools. Architects-in-Schools has been designed as one approach to realize these goals.

The Architects-in-Schools component is organized around the following roles and responsibilities. Architects-in-Schools was formally designated a component of the Artists-in-Schools program in January 1976. At that time, Aase Eriksen was appointed National Coordinator.

The National Coordinator's responsibilities include both the development of the program and the administration of it. The National Coordinator's Office provides conceptual program direction and development, trains architects and teachers involved in the program; gives professional and technical assistance to architects and teachers in the field; confers with the Artists-in-School Coordinators and state arts agencies; and assists in on-going documentation and evaluation efforts. In addition, the office makes available information about materials, resources and methods and information about the residencies themselves, their problems, process and solutions.

The responsibility of transmitting the program from a national to a local level lies essentially with the state arts agencies and their official representatives, the Artists-in-Schools Coordinators. The coordinator is responsible for the Architects-in-Schools program on the state level, selects the site and the professional-in-residence, and generally provides on-going administrative support.

Of all these tasks, one of the most crucial this first year was the selection of site and resident. The Artist-in-Schools Coordinator solicits applicants for residents and school sites and

directs the selection usually through a selection panel. Applicants are asked to submit detailed proposals concerning their objectives and the means for meeting them.

The number of schools wanting to participate in the program is a testimony to the enthusiasm of the coordinators. A wide variety of sites in terms of locale, grade level, size and organization were involved this year. In each case the program was tailored to fit the children's interests, level of development in terms of skills and comprehension, and the teaching methods which related to these different factors.

In each school, the role of the In-School Coordinator (ISC) has a powerful bearing upon the success of the program. A supportive and committed ISC is critical to the effectiveness of the architect-in-residence, as is the time allowed by the administration for this person's involvement in the program.

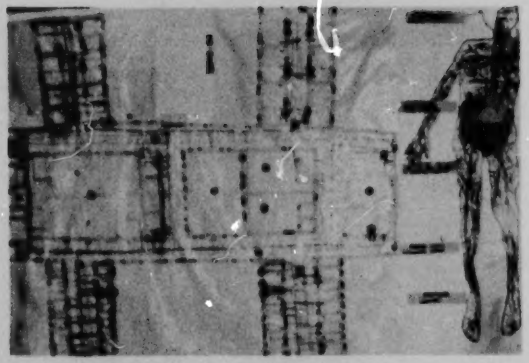
The In-School Coordinator's role is essentially one of bridging the separate worlds of the "outsider" architect-in-residence and the school community, not only in paving the way for the resident's arrival but in being responsible for finding space for the architect, getting him acquainted with the school curriculum, and generally serving as a liaison between the architect and administration.

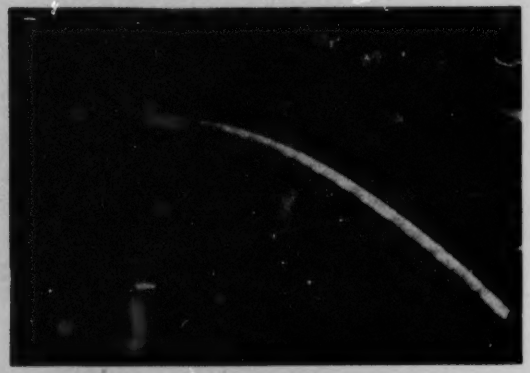
The design professionals who applied to the program and were accepted included architects, designers, landscape architects, architectural historians and planners. They were of different ages and different levels of

professional expertise. Experience in working with children or in education gave a resident an additional advantage in successfully pursuing his goals for the program, but many who did not have that prior experience were successful nonetheless. Surely this was due in part to those persons' openness to learn from a new and unfamiliar situation and their willingness to use the school's faculty as a pedagogical resource.

Architects-in-residence are expected to become part of the school community. This is an opportunity for two professional groups to work together to help each other reach common goals. The architects have much to learn from the teaching staff about child development and learning patterns as well as about the teaching-learning situation in general. They, in turn, have their own skills to exchange. The architect is expected to be a resource person for those teaching and learning about the built environment. He should guide them through the process of observation and analysis inherent in his discipline and pass on some of the designer's tools and skills. He should demonstrate the relationship of different kinds of spaces to need and use.

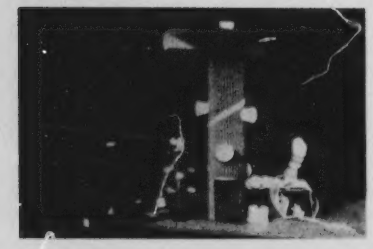
The residencies, of course, are the heartbeat of the program. Each site has its own particular formula and its own unique outcomes. During this first year the residencies were found in urban, rural, suburban and small town locations. They took place in elementary, middle, and senior high schools, public and private, those with traditional programs and those with alternative and open classroom education. In some cases the residency was clearly defined by the host school; in others, the resident was left almost entirely alone to create his own methods and means. In some schools, high expectations were evident; in others, the architect quite literally had to announce his presence. Many schools wanted to utilize the services of the





architect as broadly as possible and at the same time not disrupt the classroom routine. In these cases, the resident often participated as a resource person within the regularly scheduled classes. For schools with a traditional structure, particularly high schools or those emphasizing "back to basics," this emphasis was used to advantage to complement and enrich the school's regular program. In these cases, as might be expected, the architect spoke to literature, language and social studies classes. Topics ranged from a unit on the physical environment of the Globe Theatre and its relation to Shakespearean drama, to a discussion of classical architecture in a Latin class, to an inquiry into economic and political factors that affect the built environment in a social studies group. One architect worked with a science teacher to develop a lesson plan comparing the human body's systems with those of a building, drawing parallels, for example, between the respiratory system and the ventilation system of a building. Geometry classes learned how structures are made rigid and the functions of columns, beams, arches and domes.

Awareness exercises, were, of course, one of the most popular themes of the residencies. There were many different approaches here, often determined by whether or not the architect was working in a regular class, in his own studio with students, or as an after-school program director. Awareness exercises range from simple observation and documentation skills (writing, drawing, charting) to more demanding mapping and model building. On another level



they were used to generate sensitivity to the relationship between the built environment and people's feelings, behaviors and attitudes. Students were asked to record what they heard, saw, smelled or felt on the way to school. They were asked to describe familiar places — their neighborhood, home, classroom or bedroom. They were engaged in fantasizing about their favorite environments, their "dream" rooms, a trip to an ideal world and so forth. Some children kept diaries of spaces they entered and how they responded emotionally to those spaces. Some students were asked to imagine a monster and then create an appropriate living environment for it. Children were asked to go beyond make-believe and to consider, for example, the very real world of the handicapped. Blindfolded and/or in wheelchairs, they toured their schools, noting architectural barriers and listing elements which allowed free access. Children became aware, too, of how the physical environment is built, by using sugar cubes and glue, marshmallows and toothpicks, and straws and pins to learn structural principles. Older children visited downtown renewal sites and discussed the impact upon the city. There were role-playing exercises in which students acted out the conflicts that arise when various community interests struggle with environmental issues. Children at all different levels were able to learn something from these awareness exercises.

As awareness levels increased, architects-in-residence moved to more ambitious projects resulting in a product that was designed to demonstrate another dimension of our interaction with the built environment.

Some activities were centered in the classroom. Some classrooms were rearranged as a result of earlier awareness exercises. Larger, group-sized tables replaced individual desks; reading corners were created; spatial dividers were constructed; even loft spaces were built. A Home Economics class decided to change that specialized classroom environment. The students embarked on the design process: they agreed on changes, built a model, researched materials, obtained administrative support and approval, and finally, raised money to accomplish their objectives through a car wash.

In many schools, the results of heightened awareness of the built environment encouraged specifically decorative changes. Supergraphics and wall murals, many first reviewed and refined as models, bloomed. Graphic information and signage systems were worked on. One school, after a study of street functions and furnishings, redesigned a hallway to accommodate the variety of uses students discovered it could support.

Environmental changes of this kind give rise to attitudinal changes that can influence learning. The atmosphere of the school can become more positive and constructive.

Eventually, students were ready to construct actual objects that met certain criteria and needs. Small children in one school, studying their classroom pets — gerbils — developed "Gerbil City," a built environment that met the specific needs of these animals. One dome-building project exemplifies the use of interdisciplinary effort: trigonometry, physics

and geometry classes were involved with the actual planning and design; shop students fabricated the elements; and classes in ecology and biology managed the dome as a science project.

In all of these large-scale projects the emphasis was to involve students in the several steps of the design process in order to develop a functional structure. Identifying the problem, establishing criteria, developing data, choosing among potential solutions, receiving administrative approval, assembling resources, and finally constructing the object were separate steps in the process through which students learned how environmental changes can be implemented. As a result, play areas, outside classrooms, student activity centers, gardens, mini-parks, and nature trails were designed and constructed by students.

Many students learned valuable lessons in achieving goals. In one school, students who had designed a mini-park for senior citizens took their plan before city council to receive approval and funds for the implementation of the project. Another group whose outdoor classroom site was wrecked by vandals, went back to the drawing boards and redesigned the space to be more resistant to such attacks.

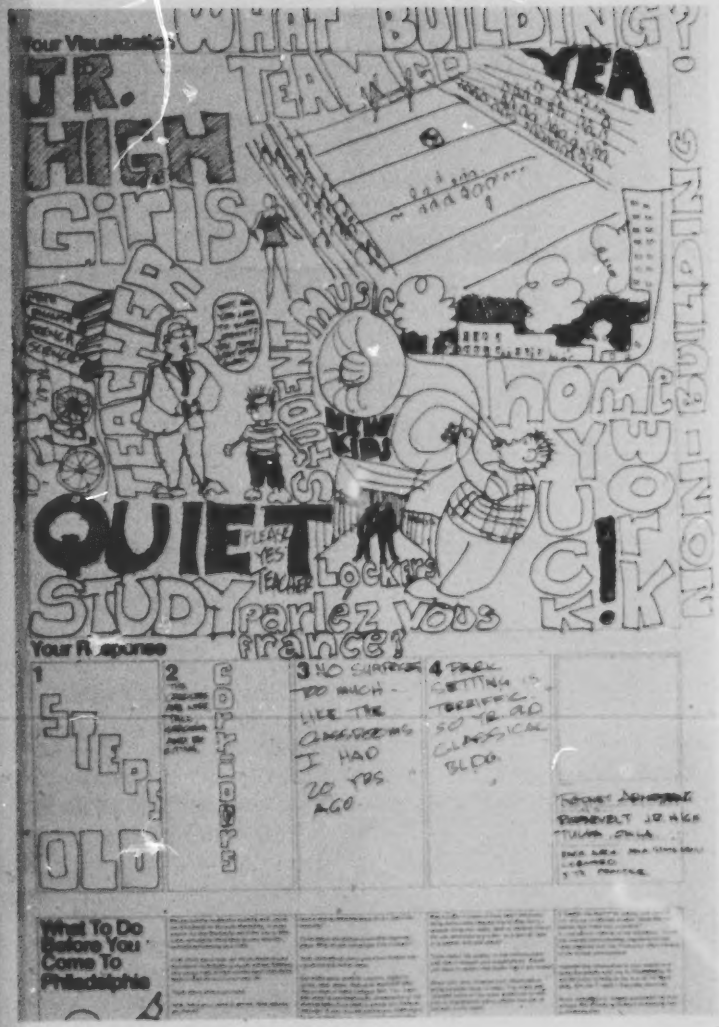
The intent with all such projects, of course, is not to produce a physical improvement per se, however much wanted or needed. Nor is it to teach children to become carpenters, landscape specialists, painters or even architects. That training is best left to others. The purpose here is to give students, regardless of developmental level, the opportunity to learn the pattern of the design process. Even if it were possible to observe an architect solving a design problem, it would be counter to the most sound educational principles to

expect a child to learn anything from that observation than the superficial elements of the process. Students who are involved in "doing design" — planning, thinking, choosing — can grasp much more than can be gained by reading about or even observing the design process. Learning takes place by doing.

Ongoing support and training was supplied in many ways. Each residency was underpinned by the support, encouragement, consultation and professional assistance offered by the National Coordinator's Office. The richness and variety of the activities created by individual residents testifies, of course, to their ingenuity and unflagging interest. But the residents were neither expected nor allowed to operate in a vacuum. Throughout the year conferences, regional meetings, workshops, site visits, built environment resource materials and professional consultants were made available to the residents, as well as the state arts agencies, Artists-in-Schools Coordinators and In-School Coordinators who would be working with them.

The National Conference New Orleans, March, 1976 brought together 27 Artists-in-Schools Coordinators who would be responsible for the implementation of this innovative program in their respective states. The purpose of the conference was to introduce this unique program and to explain the concepts and goals of the program as well as to familiarize the participants with built environment education. The three-day program involved people in developing an awareness of the impact of the built environment on their lives; in planning and conducting environmental investigations, such as an architect might do in a school situation; and in discussing the concepts and implementation possibilities of the Architects-in-Schools component.

Foreshadowing future workshops, this conference addressed itself to issues raised by the participants themselves. Some of the concerns were conceptual (Should the program's stated objectives include the relationship between natural and built environment?); some of the issues were related to



teaching methodology; others were related to cost factors. These would continue to be concerns of participants throughout the year.

The Regional Meetings for Plains, Southern and New England states took place in June and July, 1976.

These meetings were held in response to the request of the Artists-in-Schools Coordinators to meet regionally because of similar environmental needs. The format of each meeting included both experiential learning exercises and discussions of the specific issues in implementing the program. Local concerns were discussed. The Plains States meeting, for example, declared unanimously that members had chosen to emphasize the community involvement aspect of the Architects-in-Schools program. For both political and practical economic reasons they stressed the importance of involving groups such as the community arts councils and historical societies.

In retrospect, it appears that one of the most significant outcomes of these meetings was the adoption of a broad interpretation of the structures of the residencies. This decision permitted the elasticity of experimentation during this intial year, thus fostering the development of guidelines based on practical experience rather than untested expectations.

The First National Training Workshop for architects-in-residence and coordinators was held in Philadelphia in October, 1976, at the University of Pennsylvania. It brought together 27 professional designers, 26 In-School Coordinators and 10 Artists-in-Schools Coordinators from 20 states.

For three days, participants became acquainted with others in the program; worked at better understanding what is meant by built environment education; were introduced to the kinds of material available and the activities possible

through direct, hands-on experience; and generally learned more about their forthcoming role as an architects-in-school.

Each participant received a workbook that was designed to be used during the workshop and throughout the year as both a resource and as a guide for documentation and evaluation.

Four Regional Meetings were held in January and February, 1977, by the National Coordinator's Office for architects and In-School Coordinators. The meetings took place in Quincy, Illinois; Omaha, Nebraska; Franconia, New Hampshire; and Portland, Oregon. Several Artists-in-Schools Coordinators, consultants and local observers also attended. Participants worked in "job-alike" sessions to develop a set of issues for consideration by the whole group, and, in turn, to develop suggestions for possible solutions to key problems.

The site visit was an important mechanism for offering support. By this means the National Coordinator and her staff were able to deliver on-the-spot recommendations, assistance and professional support to each residency in terms of local problems and/opportunities. These visits were also aimed at uncovering school situations which might hinder or limit the architect's effectiveness and ultimately that of the program's.

Other support was forthcoming from many sources. State arts agencies and Artists-in-Schools Coordinators gave support to the component over and above their stated responsibilities. They provided information about the format and procedures for existing Artists-in-Schools programs and pointed out the particular concerns of their individual state. Their knowledge and suggestions about potential trouble areas undoubtedly prevented many of those difficulties from arising.

The American Institute of Architects assisted on both the national and local level. The National Environment Education Committee made formal resolutions to support the

Architects-in-Schools and to encourage local chapters to support residencies in their area. Members of local chapters have given time to the program, both in searching out potential candidates for residencies and in offering their services to the program as well as contributing funds or services. The Tulsa chapter, for example, organized a house tour which raised $1000.00 for the residencies. The Portland chapter raised $500. And local architects in Little Rock donated $3,325.00 to the Architects-in-Schools program.

On the community level time, resources, services and financial assistance to the project were contributed by historical societies, preservation groups, professional organizations, individual members of the community and business and civic groups.

The outcomes for this first year have been both immediate and far-reaching. Students across the country have created a myriad of products. Some fabrications have almost professional polish. Indeed, if products were the sole criteria of the program this new component should be considered successful. But Architects-in-Schools takes aim at greater and more out-of-the-ordinary results, and the many products that were made are only reminders that a unique program has functioned and even flourished in these schools.

The real results are not immediately visible. The component's goals are to place within the mainstream of our national educational system the concepts of built environment education from the point of view of the design profession. That position stresses the design process as the key to environmental change. The AIS program hopes to empower student, teacher and community to take on environmental challenges by making available to them the instruments for responsible environmental change.

This year has been the first step; in fostering environmental awareness and understanding, a legacy has been created that will continue to be a vital focus for school and community.

Residencies

The descriptions of the residencies contained in this section are based on site visits and reports received from the participants. Unfortunately, in some cases verbal and/or visual documentation was received after production deadlines and could not be included. In those instances the material reflects only earlier reports on completed and projected activities rather than the final account of the residency.

These accounts are listed alphabetically by state. Residents are listed alphabetically within the state. In the cases of shared residencies the listing is, again, alphabetical.

Resident/Site

Architect-in-Residence:
Hettie Mary Worley

Gibbs Intermediate School
Little Rock, Arkansas

Site: Urban
Population: 400 students;
16 faculty
Grade level: 4-5 plus
kindergarten

In-School Coordinator:
Don Arick, Principal

Residency/Resources

This residency was for eight months, five days a week, 20 to 35 hours per week. The resident conducted her own environmental design program on a set schedule, seldom working with class teachers. Many community organizations, people and places enriched the program. Included in these resources were: the Arkansas First State Capital education program, the Little Rock Historical District Committee and the Arkansas Territorial Restoration. Outside consultants included the Curator of Arkansas First State Capital; the director of education at the Arkansas Art Center; an environmental consultant from the Arkansas Department of Education; the director of the Arkansas Ecology Center; an historian from the Quapaw Quarter Association; several architects and photographers.

Special funding was provided by donations from the local chapter of the AIA, local architectural firms, the Department of Natural and Cultural Heritage and in-kind Contributions such as the use of darkrooms and duplicating services. Two mini-grants were received for redesigning classrooms and the school provided money for paint.

Program

The architect works primarily with short-term activities and field trips as part of a process leading toward individual and group building projects.

To introduce herself to the students, the architect passed out a questionnaire which she herself answered so that the students would know who she was.

In her environmental design workshop, she began by introducing the children to concepts of the environment. The students were asked to draw their homes, telling what they liked and disliked and articulating important features of their immediate environment. This was then expanded into a mapping project of the entire neighborhood, locating their street on a city map, studying it to find important streets and landmarks, then drawing their own map. The children traced their routes to school and home, what colors and textures they liked, pointing out the elements that made up their environment. Then the students broke up into smaller groups according to their interests and did in-depth analysis of various elements in their environment — the school, playground, bike trail.

Field trips were an important part of the workshop. The class went to the Art Center to examine expressions of elements of form. They went to the Territorial Restoration to see earliest buildings of Little Rock, and to find out what buildings tell about the people who lived there. A trip to the Arkansas State Capitol was preceded by a slide show of the building's history. The class discussed the monumental scale of the building and its domination of the landscape, comparing it to the new state capitol. The architect asked her students' "How does it make you feel" and "How does the feeling relate to the building's design?" She wanted students to determine how architecture reveals what is important to a culture.

After studying habitats, the students on a field trip to a local park were asked to individually provide themselves with the basics of living — water, food and shelter. They built a structure with the materials they found in the woods. They then went back to the classroom and built models of their shelters.

Several guest lecturers were brought in to supplement activities. A photographer showed the students similar concerns of the visual

art process in another medium. And a lecturer from the Arkansas Ecology Center explained geological divisions of land in the community relating the form of the land to how it shaped what and where man built.

The children were also shown a film, "Boomsville," an animation of the history, growth and change in New York City. The architect then prepared her own slide show on Little Rock showing the same concerns.

These awareness exercises led to the final activity of the year, specific design projects done individually or in groups. Areas of study included playground design, kindergarten class changes, school graphics, history of Little Rock, outdoor learning yard, photography, and future spaces. The children made models and picture presentations; painted a mural in the central hall and all the bulletin boards with bold graphics; and built furniture, storage and playhouses for the kindergarten.

Besides the environmental design workshop, the architect participated in other classroom projects. She visited four classes following their environmental education study unit to talk about the built environment. She did sequential questioning about perceptions of the built environment and the natural environment to show that the city is as complex a system as the natural system; and urban systems need to be more responsive to human needs.

Worley also conducted a math workshop to explore concepts of scale. They began with simple drawings and using a grid made them larger and smaller. The students measured their rooms and drew floor plans at a smaller scale. The students, after creating their own architectural scale, then were introduced to the Golden Section and did the modular game from Forrest Wilson's *Architecture: Projects for Young Adults*. Finally the math class began to develop optical illusions. They held a math fair and invited the whole school to view their work.

Several teachers were assisted by the architect to get mini-grants to improve their classroom environment. The kindergarten class worked with the architect on space awareness and building. The architect used playground equipment to demonstrate to them basic concepts of design. The workshop children then surveyed the kindergarten class, and designed and built storage cubes, a stage, play structures, pillows, banners and puppets for the classroom. The second mini-grant was for hiring Worley as their architect to change their classroom. The class built models of the classroom, studied alternative solutions to their present use of space and finally built storage units and reading spaces.

Comment

The resident comments:

The basic element we are dealing with is perception. Environment is defined by each individual's perception of it — so what we must attempt to educate are the senses. I presented the children with a framework with which to evaluate information / perceptions: that all things have form and that form can be described with these basic elements: line, color, texture, rhythm, pattern and shape. We explored these abstractions in the common things around us.

Resident/Site

Architect-in-Residence:
Thomas J. Goetting

Redding Middle School
Middletown, Delaware

Site: Rural
Population: 620 students; 34 faculty
Grade level: 6-8

In-School Coordinator:
Jack Freeberry, Assistant Principal

Residency/Resources

This residency was for seven months, five days per week or approximately 40 to 50 hours. The activities were generally conducted during class time and on weekends. About 120 students were contacted each week. The resident worked independently with his students and with a teacher in the gifted and talented program.

Outside consultants included a representative from the AIA Environment Education Committee who helped run a workshop; a former artist-in-residence; an artist and landscape architect who both worked with students.

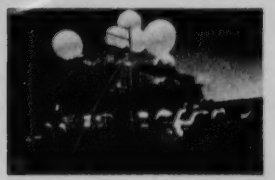
Program

The architect-in-school's goal was only loosely defined early on in the residency. Over several months it evolved to be a resource to students and teachers as a general aide in the entire learning process. The resident taught built environment education by allowing the students to design and build their own classroom environments, and using those environments to do curriculum-related activities.

He began by asking students, "How do you want your classroom to feel?" Then he worked with them to create varied environments for learning. The students converted his studio space into a classroom, using found materials such as foam cubes, inner tubes, parachutes and surplus Army cots. They built giant jungle-gym-like structures from the bed frames, fabricated entrances with cardboard and created group and personal spaces. These building activities were accompanied by sensory awareness exercises developed by the resident and another teacher.

Elsewhere in the school other changes occurred. One group repainted the classroom. They first listed all their favorite colors, voted and chose the top seven. Then they worked out a design and built a model. Finally, they applied graphic designs across blackboards, doorways and windows. Another group arranged forty-five one-foot cubes of foam rubber to create a sitting area for their reading class which met in the hallway.

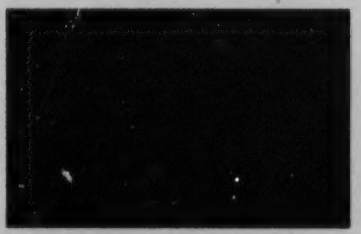
Students decided they would like an outdoor class area. Goetting had parachute material for a tent, but no way to hold it up. Balloons were suggested by one student. The class calculated the number of 6-feet-in-diameter rubber balloons and the amount of helium they would need to suspend the nylon parachute. During a trial run, they discovered that the helium leaked. Eventually they decided that thin balloons placed inside was the least costly answer; it worked. The tent was used as a giant sunshade at a local music festival and for a church group that needed an outdoor meeting place.



Comment

The architect-in-school comments:

The project was a success because we did visible things. We built things that people could see and wonder about. We were hands-on. That establishes credibility with students as well as teachers.



Florida

Resident/Site	Residency/Resources	Program

Architect-in-Residence:
Thomas Pope

Key West High School
Key West, Florida

Site: Urban
Population: 1773 students; 96 faculty
Grade level: Secondary

In-School Coordinator:
Wayne Hauxhurst, Art teacher

May Sands School
Key West, Florida

Site: Urban
Population: 30 students in special program for gifted
Grade level: 4 and 6

In-School Coordinator:
Sue Matheson, Teacher

This residency was divided between two schools: Key West, an eight-month residency, three full days a week, 22 hours per week; and May Sands, a three-month period; one full day a week.

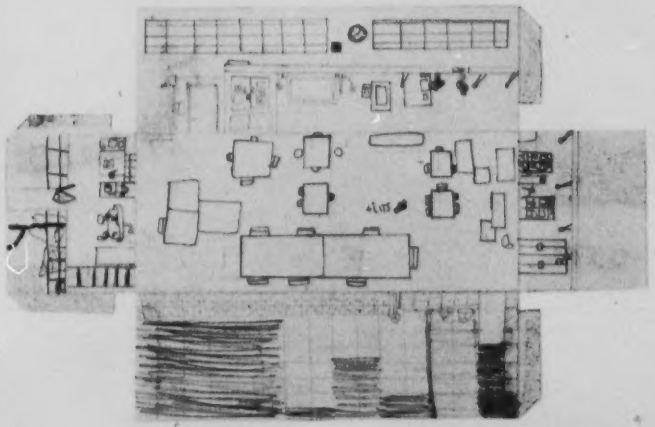
Most of the activities in the high school were carried on outside the classroom with no real teacher involvement. In the elementary school, the resident worked directly with teachers and they planned activities and developed ideas together.

Special funding came from the State Historical Society and materials were donated by the Historic Preservation Commission. The local Garden Club helped at the high school by donating plants and working on the landscape plan.

At the beginning of his residency in the high school, the architect was asked to help teachers in classes with discipline problems. It was hoped that vandalism problems could be solved through advocacy planning. To develop environmental awareness, the architect worked with several classes on a number of activities mentioned in the AIS workshop. They did a "seeing" exercise using image and reality and mapped the existing physical objects in their classroom. They also conducted a "mystery tour" — or tactile exploration — of their room. However, the students' interest waned and the architect abandoned these kinds of activities and concentrated on shorter activities and smaller groups of students working on individual projects.

The next activity was in response to a teacher's request. A geography teacher asked the architect to help her students develop a map mural of the USA and the northern hemisphere on a wall in a major corridor. This was highly visible and the project generated excitement among the students.

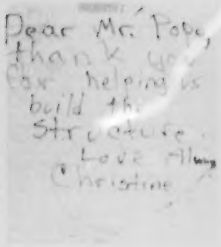
Pope next developed core groups from volunteer students in his ISC's art classes. The basic goal of these groups was to improve the visual appearance of the school campus. One group — the map team — measured the school and drew a base map of the high school for use in making design decisions about the landscape. The model team chose areas of the school that needed improving and made scale models of these spaces for study.

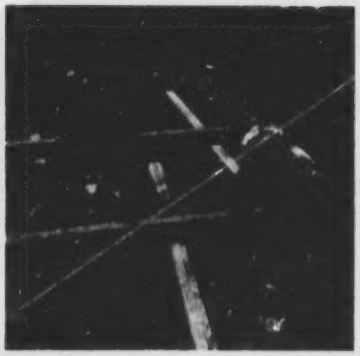


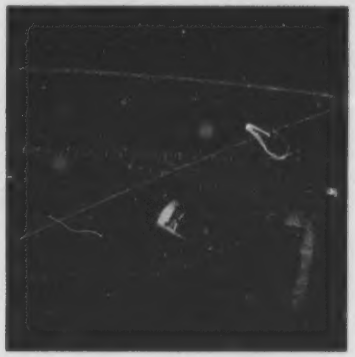
The final result of these teams was a comprehensive landscape map, which was made into posters and displayed in the school. Planting boxes, designed and built by the students, with materials supplied by the architect's budget and plants donated by the Garden Club, were placed on the patio, a major student meeting place.

Another project done with this group introduced the students to the "Conch" houses, a unique architectural style of Key West. After seeing slides, the students sorted them, trying to classify the types of Conch houses. They drew large posters to show the best examples of each. This was followed by a tour of the old city to analyze these houses in the context of their environment.

At the May Sands school, the architect used an advocacy-planning approach. He called on the students to analyze the classroom space based on the activities that occurred there. They then developed a list of the activities that did not have an appropriate space for their function. After building various temporary spaces that were to be prototypes of permanent spaces, they built a permanent platform to house the spaces. The students were just developing their spaces when the school year ended, so the architect will return next year to help them finish.







Comment

At both the Key West High School and the May Sands school, major structures were built in the school. The difference between the projects is their location and use. At the high school the planting boxes are a positive element in a student meeting area, but are static elements. At May Sands, the platform structure can serve as a teaching tool by allowing students to develop and change the space it encloses to suit their needs.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **Russ Riley** Lanai High and Elementary School Lanai, Hawaii Site: Rural In-School Coordinator: Darlene Mondo, Art teacher Maui High School Kahului Maui, Hawaii Site: Rural Grade level: 9-12 In-School Coordinator: Saburu Watanabe	This residency was a team effort. The architect-in-schools worked with Thomas Woodruff, a sculptor.	The major effort of this residency was to develop an earth sculpture on the grounds of Maui High School. Utilizing only materials which were present on the site prior to the execution of the piece, and forms which are observable in nature, the completed sculpture is over 280 feet long and 140 feet at its widest point. The piece consists of alternating depressions and mounds creating a wave-like form on the earth's surface. The architect-in-school provided the landscape setting for the sculpture and also produced an irrigation plan to stabilize the soil. On Lanai, one of the approaches used to develop awareness was to ask the students to document the boundaries of the town — an interesting project — since the town is part of a larger economic unit, the plantation, which encompasses the entire island. Lanai is, in effect, a company town. The school itself is a community resource; the school library is used by everyone, not only the students. The architect-in-school has also been planning various projects for the coming school year with interested teachers at Lanai which will incorporate built environment education into the elementary and high school curriculum.	This residency represents one of the initial efforts of the Hawaii arts agency to develop a comprehensive plan through which several components of the Artists-inSchools will work jointly in schools in an interdisciplinary approach to the arts.

Resident/Site

Architect-in-Residence:
Gary Olsen

Kenwood Elementary School
Champaign, Illinois

Site: Suburban
Population: 633 students; 35 faculty
Grade level; 3 and 4

In-School Coordinator:
Joyce Grusy, Teacher

Franklin Jr. High School
Champaign, Illinois

Site: Suburban
Population: 600 students; 48 faculty
Grade level: 7-9

In-School Coordinator:
Norma Thompson, Math teacher

Central High School
Champaign, Illinois

Site: Suburban
Population: 1350 students; 85 faculty
Grade level: 10-12

In-School Coordinator: John Scarpetta, Architectural drafting teacher

Centennial High School
Champaign, Illinois

Site: Suburban
Population: 1105 students; 80 faculty
Grade level: 10-12

In-School Coordinator:
Allen Boehm, Architectural drafting teacher

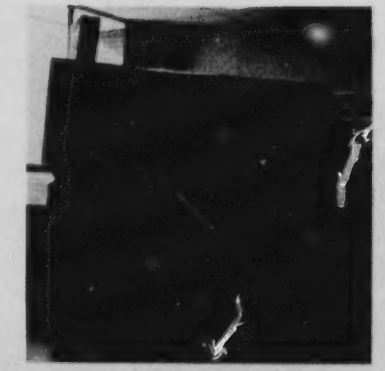
Residency/Resources

This was a four-school, sequential residency; three full days a week; 12 to 18 hours per week. The high schools (Centennial and Central) shared time during the last third of the year. Activities were conducted during normal class time. The resident worked with all third and fourth grade teachers in the elementary school. At the junior high school, the architect worked with six teachers as well as the middle school coordinator and principal. Students were excused from regular classes to work with the resident three times a week. In the high schools he worked only with architectural design and drafting students in their assigned classrooms.

Many community resources were used in this residency: the Champaign County Historical Museum; University of Illinois; local contractors' association; Champaign County Arts and Humanities Council. The resident brought in guest lecturers on architecture and environmental concerns as well as visiting artists — a sculptor and a graphic designer — who worked with students. The local members of the AIA were consultants in this program.

Program

Olsen took the elementary students on many walking tours to study architectural details. They also visited the Champaign County Historical Museum, the World Heritage Museum (where they researched the mound builders of Cahokia), and the Krannert Art Museum. A trip to New Salem and Springfield showed the children architectural styles that ranged from log cabins to the stately capitol building, as well as the importance of preserving old buildings.



In-class activities introduced the students to architectural scale which they proceeded to use in the building of small individual cardboard houses. The students decided that they wanted to build a real house that they could use and get inside of. They constructed a house of cardboard that was large enough to enclose all the students. The house had windows, a door, and a moveable roof which allows for a skylighted effect when students are using the space for reading. This activity was actually completed in one day.

The resident brought two artists to the school to expand the children's understanding of other elements in the built environment. One, a wood sculptor demonstrated his art and then the children created their own three-dimensional sculptures. The other artist was a graphic designer who demonstrated architectural graphics to the class.

At the junior high school, students worked on individualized projects. They designed an environment in which they would like to live with their family. Most of these projects took on the form of single family residences. The students made drawings and built models.

Students participated in walking tours, perception and identification exercises, a month-long project analyzing the community (with thoughts on how to make a good community better), and created a collage which illustrated life in a community. Other subjects such as scale, measurement, texture and architectural history were covered in class presentations or slide lectures.

High school students toured local homes, apartments, architects' studios, and finally took a trip to Chicago where they were introduced to the buildings of Wright, Sullivan, Richardson and Mies Van der Rohe. The high school students were also introduced to principles of landscape architecture, interior design, graphics, presentation drawing, room relationships, scale, urban planning and zoning.

However, the main emphasis of the high school residency was with the advanced architectural design class consisting of juniors and seniors. As a resource person, Olsen brought in several guest lecturers who discussed a wide range of environmental concerns and took the class on at least one field trip a week. A semester-long project to design a residence followed a prescribed program and culminated with a final jury of local citizens who selected a winning design from those submitted. This house will actually be built by the building trade classes.

One of the most successful projects was a neighborhood environmental score, otherwise known as TRIP (Traveller's Response to Imagery Perception). This activity was used as a vehicle to make the students think, experience and perceive rather than just follow an itinerary. The area chosen for the 95-minute exercise was close to the high school. Each student received a score sheet, a meter-length of string and a map of the area, with directions "to observe" (textures, trees, houses, unusual features, fences, sounds, things beneath your feet, vistas, etc.) and "to do" for each of the activities listed. Neighborhood scoring serves as a vehicle for firsthand involvement and can be used as a problem-solving score as well.

Comment

Olsen's work with these students prompted the high school drafting teacher to observe that students' awareness had increased and that they were beginning to think beyond drafting itself and to understand it within the larger architectural design process.

Resident/Site

Architect-in-Residence:
Richard Twiss

Lincoln Elementary School
Quincy, Illinois

Site: Small town
Population: 600 students;
25 faculty
Grade level: Elementary

In-School Coordinator:
Don McKinley, Principal

Adams School
Quincy, Illinois

Site: Small town
Grade level: Elementary

In-School Coordinator:
Al Tervelt, Principal

Senior High School II
Quincy, Illinois

Site: Small town
Population: 1500 students;
100 faculty
Grade level: 11-12

In-School Coordinator:
Eugene Johnson, Teacher

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Residency/Resources

This residency was held in three schools. At Lincoln, the resident was available between October and February for three days per week. Activities were generally conducted during class time. At the Adams School, the architect-in-residence was available between February and May for three days per week. In the Senior High School II the residency lasted from November through May.

A Community Advisory Group was formed to assist with the residency and to help it reach the total community. The architect-in-school sponsored and conducted a number of walking tours, house tours and a cemetery walk for the community at large. In addition, the resident worked as a consultant at the Art Center to help initiate an architectural awareness program.

Program

At the Lincoln Elementary School the architect-in-school implemented a course in a variety of built environment related subject areas. One area was community planning. Students used an imaginary site and discussed the relationship of the various components of a new community which could be constructed there. Planning was accomplished through the use of a large drawing of the region and "stick-on" representations of various buildings.

Students were introduced to basic structural concepts through lectures and demonstrations with wooden models. Architectural styles represented in Quincy and their significance were discussed. Slides were used to make the discussions more real.

After an introduction to the concept of space perception through discussion, the class visited various spaces in the school. A barrier was placed in a major corridor to help students analyze traffic patterns and their reactions to the barrier.

A special consultant helped to conduct a series of activities on designing playgrounds. After a slide presentation of various concepts of play activity, the students went into the gymnasium and were given chairs, colored paper, boxes and mats, and asked to improvise, creating their own play activities. The activity was photographed and video-taped and presented to parents and community.

The program at the Adams School included outdoor field trips in the form of treasure hunts, one at a cemetery and one at an historic house. Students were asked to record their impressions of each site.

Activities at the high school included a design by an art class of a large outdoor mural for a blank wall in a downtown location; the activity was initiated by a local businessman. The architect-in-school participated in a Community Issues Forum at the high school and gave a presentation on architectural styles represented in Quincy. He also began a seminar on architectural history. Students were led by the resident on an architectural walking tour.

Comment

Quincy is a town with an extraordinary architectural heritage representing virtually all American building styles. An architectural historian was chosen for this residency so that the community as a whole could be sensitized to its unique environment through involvement in the program.

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Resident/Site

Architect-in-Residence:
Myrene Taylor

Northwestern High School
Kokomo, Indiana

Site: Rural-suburban
Population: 2500 students; 110 faculty
Grade level: Middle and secondary

In-School Coordinator:
Thomas McCraken, Principal

Residency/Resources

Residency was for nine months, five days per week, 30-40 hours per week. Activities were conducted generally during class time. This residency was in a school that had a prior involvement with Environmental Education. The resident worked mostly with two art teachers, one on the high school level and the other on the middle school level.

Community resources used included the City Planning Commission and the County Police. Taylor brought several resource people from the community into the classroom: an architect specializing in solar energy; an engineer to lecture and work with construction problems; an architecture instructor from a university; and an interior designer.

Program

Myrene Taylor worked primarily in short-term awareness activities and projects as follow-ups to perceived needs.

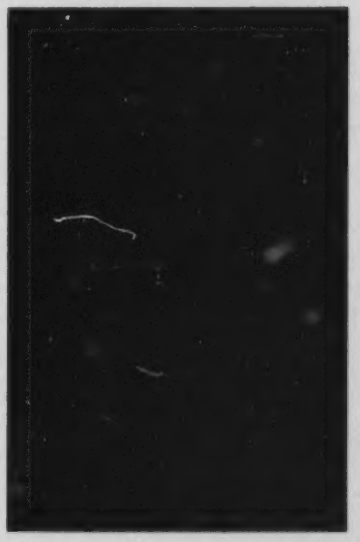
She began her residency with a slide presentation to the teachers, explaining to them the potentials of the program and ideas as to how the architect might fit into their individual classrooms.

The first activity with the middle school students intended to introduce architecture through the art media. The activity began with a discussion of the students' environments, at home and at school. They wrote down the things about the place they liked best, and transferred these verbal accounts into pictorial form. This "favorite environments" project was followed by a discussion on sensory aspects of the environment. The next step was to have the children use their imagination and design a creature or monster with special needs. The students learned about animals and how they exist in their various environments. The students then programmed the needs of their monster and designed a habitat to fit these needs.

The students also worked on a private space assignment. The project began with having the students draw their neighborhood, including the streets, library, parks, personalized with reminiscences. The students then drew patterns of circulation, walks and so forth. Next the students were asked to design their dream room. As a programming technique, they analyzed the good and bad points of their existing room. The architect tried to make the students aware that rooms don't have to conform to standard dimensions and expectations.

In a seventh grade math class, Taylor had the students create their own scale using squares of colored paper. Each student took 10 squares, pasted them on chipboard and labelled them. They used the entire strip as one unit with which they measured the classroom and made models.

In the high school, the resident functioned as a resource person for many different classes. In Latin and classical literature classes, the students learned about classical architecture through both lecture and actual demonstration of domes and arches, town planning and family residences. The architect took the classes to see local examples of these styles of architecture. A similar project was conducted in a German language class, where the students researched different architectural periods and how these styles



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related to German culture. They were asked to consider such issues as how the social and political atmosphere resulted in a particular style.

Taylor also gave a wide variety of lectures, slide and film presentations to many different classes. She prepared a slide show with music that was shown to all the H.S. art classes. The show dealt with all aspects of environments; form, space, interior details, and also showed architecture as form, its relation to environments, space, texture/color. Another lecture given to several classes was on vernacular architecture and farm architecture; most of the students grew up on farms but never knew the history of their local architecture. Again this lecture was supplemented by a field trip to examine local examples.

Taylor also tried to involve students in changing their environments. She worked with the band students to change their practice rooms, to solve their lighting problems by using lighter paint, and decorating the room with stencils and identifying rooms with plaques.

The Visual Design students worked with three-dimensional spatial definers. Students designed out of large pieces of cardboard large pieces of geometric sculpture. These definers were then installed in the classroom; connected by string yarn and other means to change the classroom space.

The art class did an exercise to create environments that would portray or express a word. The class was divided into two groups, one group creating a scene with found objects in the room — chairs, tables, paint pots, plants, and the other group would try to guess what feeling or word the environment was trying to communicate.

Another art project, intended to create forms to show concepts, analyzed what students did not like about the school environment and why. Noting that the spaces and the color of the school were the worst problems, they tried to experiment with these factors by taping colored tissue paper to the ceiling tiles in color gradation. People were glad to see color and movement in the hallways.

Together with the science teacher, Taylor developed a unit comparing systems of the human body with those in a building. Initial discussion involved analysis of the spaces within the school, laying out the building walls on a huge piece of plastic. Students then began a "plan" of the human body. The class first dealt with the respiratory system/ventilation system, adding windows, doors and vents to the school map; lungs and trachea to the body map. Students compared themselves to the cells of the body; the administration was the brain. Other systems mapped this way were the circulatory/heating system, and the waste system.

Taylor also formed a built environment club during activities period where approximately twenty students engaged in discussions and activities on a more personal level with the architect-in-residence.

Comment

After a long planning and introductory phase, the residency developed continuously over the course of the year. Great interest was generated in the school population and the residency will continue next year. Planning meetings with resident, teachers and principal were held at the end of the year.

Resident/Site

Architect-in-Residence:
Damon Ohlerking

Eagle Grove Community Schools
Eagle Grove, Iowa

Site: Rural
Population: Middle School, 491 students; 27 faculty
High School, 387 students; 28 faculty
Grade level: 5-12

In-School Coordinator:
Richard Cahalan, Science teacher

Residency/Resources

This was a nine-month residency, three days per week, 20 to 25 hours per week. The resident usually worked with four or six classes per week. There was an after-school group that met once a week. Ohlerking worked extensively with many teachers in all subject areas as well as the principal and a student coordinator.

There was extensive community involvement in this project. Ohlerking worked with the community to develop a five-year project for the upcoming town centennial. Another community project involved students and school. Outside consultants brought into classes by the resident were: a realtor, contractor, banker, electrician and plumber.

The school contributed $15,000.00 toward the park project. The resident believes that donated services would be equal to that amount.

Program

There were several aspects of this residency. As the architect-in-residence for an entire school system, Ohlerking worked with students in both middle and upper schools, inside and outside of class. Within the classroom he worked with history, language arts, math and art classes. One activity involved taking the eighth grade history and language arts classes on a "mystery tour" of their community. A slide show depicting old houses, roads, and prairie plants and flowers preceded the bus tour, illustrating what students should watch for. On the trip, students examined the remains of an old stagecoach stop, investigated various architectural styles of houses and visited an old cemetery to make charcoal rubbings of details on headstones. After the tour students were asked to write imaginary letters to friends describing the community 100 years ago, today and 20 years from now.

Another awareness exercise used field trips, slides and a review of various architectural details to stimulate compositions, documentation and illustrations about what the group observed.

A math class examined the costs of building a home. First they drew plans and built models of homes. They interviewed several consultants to determine the cost of their plan. Realtors, contractors, bankers, plumbers and electricians gave them information about costs. The emphasis of this project was on measurements and comparative pricing.

Continued

At the high school level, urban studies was a focus for several activities. One involved a land-use simulation game. Students assumed different constituencies involved in a development plan for their community and became aware of the complexity of land-use decisions. Seniors were also involved in various surveys on urban land use, housing, types of housing units, recreational facilities and retail trade in their community. Students were divided into teams and assigned several blocks to survey and people to interview. The information was transferred to maps.

In an art class, students were told to find the dimensions of a large space in their school, define its uses and design a mural that related to both the space and the function. Individual designs were submitted by the students, discussed, refined and a final design was agreed upon and painted.

The resident worked with after-school groups as well. A core group of students met weekly after school and worked on individual projects. As a group activity they toured another community and then mapped their impressions of the town.

The architect was involved in developing several design proposals for the school. A long-range design for landscaping, involving student participation was created for the middle school.

In the high school, Ohlerking worked with students to develop a design for a park and outdoor classroom. A senior built the model of the design and it was ultimately approved by the school board. Students built the benches, planted trees and constructed waste receptacles.

In addition to this, the resident has been involved in various community projects. He has spoken on preservation to local community groups and has worked closely with a community group to develop a five-year project looking toward the upcoming town centennial. One immediate outcome of this project is a column in the local newspaper gathering and presenting information about the community's built environment.

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Comment

The resident comments:

The middle school is an ideal setting for built environment education because the students have already learned the basic skills but have not yet begun the heavy concentration is separate subjects. "Problem" students can be involved in activities that demand discipline and perseverance.

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Resident/Site

Architect-in-Residence:
Gerald E. Allen and Criteria

The Open School
St. Paul, Minnesota

Site: Urban
Population: 500 students; 45 faculty
Grade level: K-12

In-School Coordinator:
Wendell Carroll, Teacher

Criteria is a collaborative of architects and designers whose work focuses on the built environment. Working in this program in addition to Gerald Allen was Walter Albertson (visual artist), Carol Capistrant (graphic designer), and Robert Staricka (designer).

Residency/Resources

This residency ran from September to June and was for five full days per week. At least three artists worked in the school at different times each week, each offering a different emphasis and thus creating a varied program. Activities were conducted during class time, after school and on weekends.

Program

Because the Open School moved this fall into a large, inner city high school building, plans involved using the students to improve the environment. Two of the architects-in-school worked with the students in building activities, constructing furniture, storage and student cubbies. Working within the established curriculum, the architects-in-school and the students worked on the visual aspects of the school, using signage and graphics to turn the corridors into communication media. A logo contest was initiated, and the winning designs, refined with the help of the graphic artist, were used to replace the present identification on the outside of the building.

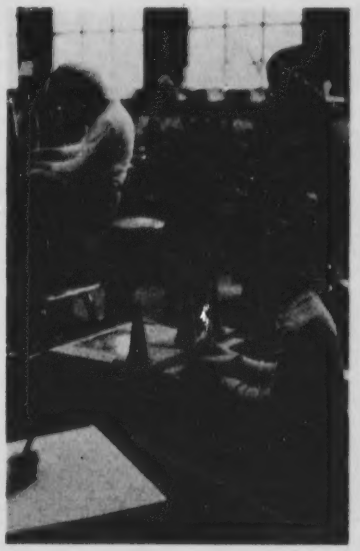
The activities of the residency are also planned for the needs of the three age groups found in the school — elementary, middle and secondary. For the youngest group, there was a class on "homey abodes," translating from drawings to models prairie houses, castles, self spaces and the city. For the middle age group, there was a class on structures using different materials such as paper, cardboard and wood. The students built the tallest structure they could, the largest structure, and the farthest span. The older students focused on community change and what is architecture. Other activities conducted with the students included: room planning, why homes look as they do, drawing with tools, model building, large scale graphic art, and construction.

Two of the other architects-in-school worked with fantasy art, helping the students to fashion beings as different as their imagination could create. They worked in groups to determine the clothing, architecture and the history of these beings.

Activities have included working with a Theatre in Action class to help design and organize the theatre area. Designing a thrust stage, organizing storage for costumes and props, and setting up a light booth have been some of the projects. Plans are being developed for the playground and the Early Learning Center. The older students are being drawn in to plan and create a useful home base area — a gathering spot for communication and informal interaction.

Comment

During this residency the school children had an opportunity to observe the members of Criteria working on projects of their own, such as a futures exhibit for the Science Museum, a new underground office space, design and planning of a preschool program and building, and the renovation of an old part of town.



Resident/Site	Residency/Resources	Program	Comment
Architects-in-Residence: **Robert Close** and **Carl Vogt** Centennial School District Circle Pines, Minnesota Population: 1500 students; 80 staff In-School Coordinator: Dr. Robert E. Buresh, Director, Environment and the Arts Program Project Coordinator: Dr. Robert E. Buresh	This was a team project: the architects-in-residence worked together in all schools for various lengths of time throughout the school year. The schools' goals for the residency were to design various environmental education facilities. The team worked with teachers as would an architect with clients: developing the planning, design and implementation of environmental education sites. The team held a pre-planning session in July with school staff, showing a prepared slide presentation. The first part of the residency was spent on site visitations and surveys. This followed with a presentation of site improvement possibilities and the rest of the time was devoted to implementation.	The architects-in-residence were primarily involved in site development activities. After conducting a workshop for staff members on how to teach others basic fundamentals of design and planning, the team worked with an environmental education curriculum planning group, which consisted of 35 parents, teachers and eventually students, to develop school site changes and curriculum. They made a report of proposed improvements, to the School Board during March 1977. The report identified each school site, proposed plans, costs and available funds from various sources. The projects carried out in each school are as follows: Centennial Elementary School: The rationale was to provide children with an opportunity to develop awareness of the out-of-doors, and to improve the physical setting of the school site. Projects included a creative playground, landscaping along the fence and playground, an obstacle course, a nature trail, a courtyard and a softball field. Students participated in the tree and shrub plantings, and staff members and parents helped construct the playground apparatus. Centerville Elementary School: The rationale was to develop natural features on the school site, to expand the existing curriculum into the outdoor areas, and to involve community in development and utilization of these features. Plans for the school included a creative playground utilizing poles, timber, tires and other common things; a nature trail/creek study; an amphitheater; landscaping; and a pond. A plant-a-tree open house involved many parents with their children planting trees and shrubs. Centennial Junior/Senior High Schools: The rationale was to encourage participants to involve themselves in planning and creating their environment, and to increase their understanding of the interaction between people and their surroundings. Projects included an outdoor sculpture (designed not only for aesthetics but also to be climbed and played upon), a rooftop meteorological station, an outdoor classroom, a nature and exercise trail, a courtyard, a greenhouse and an amphitheater. Golden Lake Elementary: The goal was to develop more natural vegetation at school site. Plans included general landscaping improvements, a creative playground, and a wildlife feeding area. Staff members participated in construction of playground apparatus and tree and shrub plantings. Lovell Elementary School: The goal was to concentrate on a comprehensive plan for the utilization of the whole area. Projects included a creative playground, fence plantings, and a nature trail.	The projects carried out in this year's residency were part of the school district's long term environmental plans. One administrator commented, "It's really fun to see these things happening, to see parents getting involved. I imagine I'll get my chance to dig too . . . at least I hope so."

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Resident/Site	Residency/Resources	Program	Comment
Architects-in-Residence: **Neil Weber** and **Steven Weeks** Bethune School Minneapolis, Minnesota Site: Urban Population: 580 students; 28 faculty Grade level: K-3 In-School Coordinator: Carolyn Papke, Teacher Harrison School Minneapolis, Minnesota Site: Urban Population: 420 students; 19 faculty Grade level: 1-8 In-School Coordinator: Sally Leclaire, Teacher Holland Elementary School Minneapolis, Minnesota Site: Urban Population: 330 students; 24 faculty In-School Coordinator: Mary Jane Higley, Principal Lyndale Elementary School Minneapolis, Minnesota Site: Urban Population: 740 students; 44 faculty Grade level: K-6 In-School Coordinator: Richard Cornwell, Principal Project Director: Seymour Yesner, Consultant English and Humanities, Minneapolis Public Schools	Each architect-in-residence was in school half-time during the school year for 20 hours per week. Steven Weeks worked mainly at Bethune and Harrison; Neil Weber worked mainly at Lyndale and Holland. It was expected that the architects-in-school would redesign and reshape environments for learning as well as serve as resources to specific teachers who might want to include elements of design, theory, form and structure into their courses.	At the Bethune school, teachers and students with the architects-in-residence designed a courtyard which was expected to serve as an outdoor learning environment. The design was brought through the model stage. Construction was, however, contraindicated by an environmental impact study of the school site. Students at Bethune were also involved in building models and personal spaces. At Harrison, the architects-in-schools were asked to work with teachers and staff to develop the auditorium as a dance demonstration, rehearsal and lecture space for three dance residencies that occurred during the year. There was considerable interaction in this school between the dual AIS components — architecture and dance. A dance platform was constructed and used by the participants in the dance program. At Holland the initial program was to develop graphics for the school; however, scheduling difficulties and lack of school preparedness presented obstacles. There is interest in developing this program for next year. At Lyndale, the open school design was perceived by teachers as a problem defined by noise, poor use of space and lack of small-scale spaces. The architects-in-residence worked with the teachers through a series of awareness exercises to help them learn about the impact of space and the environment on the learning process.	The resident comments: It is important in conducting any project that teachers and architect develop a partnership that combines the architect's design process with the teacher's methodology. The products are far less important when the process of doing is emphasized. The worst thing to do is to plunge into complexity without first building a base of personal understanding. Hypothetical problem-solving enables a teacher and children to begin establishing goals and priorities without the encumbrance of the complicated real world.

Resident/Site

Architect-in-Residence:
Garry Harley

Arbor Heights Jr. High School
Omaha, Nebraska

Site: Suburban
Population: 915 students; 60 faculty
Grade level: 7-9

In-School Coordinator: Tom Brown, American History Teacher and Department Head

Westbrook Jr. High School
Omaha, Nebraska

Site: Suburban
Population: 459 students; 40 faculty
Grade level: 7-9

In-School Coordinator: Tony Snyder, Fine Arts Coordinator

Valley View Jr. High School
Omaha, Nebraska

Site: Suburban
Population: 727 students; 50 faculty
Grade Level: 7-9

In-School Coordinator: Joyce Brader, Art teacher

Residency/Resources

This resident worked at three sites, each lasting 10 weeks; three days per week, 20 hours per week. Harley worked with art, history and science teachers.

The architect-in-residence used Omaha City Planning Commission for data and maps. He received materials from the Omaha chapter of the AIA.

Program

At Arbor, two major projects were developed. The first was an investigation by the science classes of the potential impact of architecture on the energy crisis. The students studied the potential impact of design on the utilization of solar energy and climate, and this led to building a hot-air passive solar collector. Students at Westbrook worked on a similar project and conducted various table-top experiments. This too led to the construction of a second type of collector.

The second major project was a study of the problems of growth in western Omaha. The process of land conversion was observed by using aerial maps. A 1960 map was used to document what lands had been converted from rural to urban use and what structures have been demolished. Another map, from 1972, was used to document all urban additions during the 12-year period. In both projects reading assignments were given, newspaper articles on current relevant growth issues were clipped and discussed, and lectures about urban growth were given by the resident.

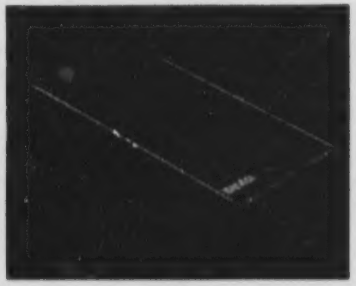
The architect-in-school worked with the art class of the ISC at the Valley View School to develop visual awareness and understanding of the environment. Projects included decoration and mural painting in the cafeteria; a Gothic architecture study; color theory studies, involving color observation and recording; and kinetic/graphic designs for blind students. This last activity also included an assessment of physical barriers for the handicapped.

Other activities that led to an understanding of the design process were exercises that used sugar-cube construction to demonstrate basic architectural forms and tracings of school working drawings to make observations about school environment.

In addition to his in-school activities, the resident also held sessions with local architects and educators from the University of Nebraska to explain the goals and progress of the program and what part these persons might play in the future development of AIS.

Comment

While his short-term residencies did not allow for in-depth program development, the resident was able through the design and building of solar energy panels to focus student attention on problems of design, energy conservation and environmental issues in a practical and experiential way.



New Hampshire

Resident/Site

Architect-in-Residence:
Ron Haase

Profile School
Bethlehem, New Hampshire

Site: Rural
Population: 280 students; 21 faculty
Grade level: 7-12

In-School Coordinator:
Laurie Blaney, Math teacher

Residency/Resources

This was an eight-month residency, five mornings a week, 20 hours per week. Activities were conducted during regular classes and during lunch time and Haase worked with teachers in art, math, shop and graphics, and social studies classes as a co-teacher. If required, teachers adjusted class plans to include the architect. Class experiences ranged from single lectures to five-week long projects.

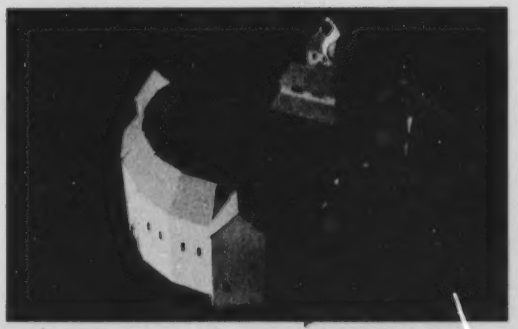
The community was used for field trips and local experts from the community were brought in to aid students on projects.

Program

As the introductory activity to his residency, the architect worked with the high school geometry class on an introduction to geodesics, in preparation for a dome-building project in the spring. This project involved field trips to nearby domes, model making, and construction by the students of a metal-tube climbing structure which was an elliptical dome. The spring dome-building project placed emphasis on a multi-discovery approach. Designed by the geometry class, the dome was laid out with the help of the trigonometry and physics students, fabricated and erected in the school shop classes, and organized and managed as an ecological and biological project of the life science classes.

The seventh and eighth grade art classes worked on what the architect termed as an "Architectonics" project. Students composed sets of paper forms on a cardboard square, making colorful collages. Each paper form was then given a height value, and students drew isometrics of their designs. After this the students worked on making scale models of their designs. This way the students could see the development of their compositions from two-dimensional design to three-dimensional isometric to three-dimensional model. Students became familiar with certain terms: abstract, composition, isometric, and negative and positive space.

Haase also conducted various lectures at the teachers' request. The architect spoke to the music classes about acoustics. He then took the classes on a tour of the school trying out various acoustical phenomena like reverberation, echo, and flutter. Haase lectured to the French class on the transition from Romanesque to Gothic architecture. A presentation to the English literature class on the history of the Globe Theater was accompanied by a scale model of the theater to demonstrate the relationship of architecture to the staging of Elizabethan drama.



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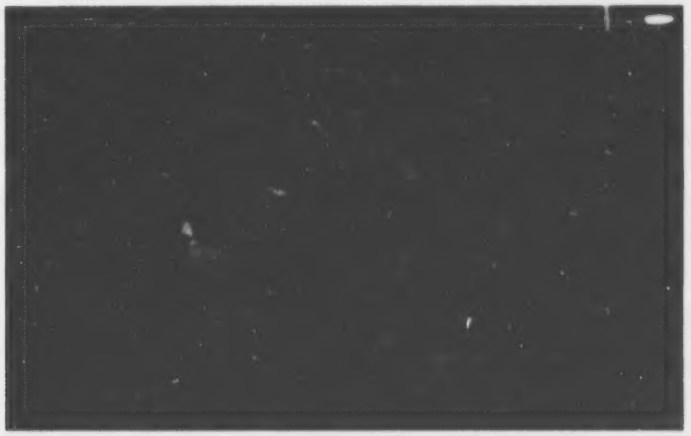
In the senior high school, the architect worked with a social studies teacher to develop a unit "Shelter of Cities." First, the architect lectured on primitive shelter as influenced by nature, building materials and life style. Then a three-day exercise was held to analyze the students' homes, discussing the same influences.

In another social studies class, the architect conducted a town planning project that lasted four weeks. The first phase was analysis of the town, recording existing conditions. Students drew maps of their town from memory, then compared their drawings to geodesic survey maps. The students then built contour maps. The second phase was to determine the needs of the inhabitants. The students used a questionnaire to survey the ideas that the people have about their town. The third phase involved solutions and planning for the future. The students saw a film on cities of the future, and the architect gave a presentation on the goals of the town. Students assumed the roles of various members and groups of the community and wrote on the future needs of the community. The students also made zoning and street maps of the future town, which they discussed along with their papers.

With the industrial arts class, the architect worked on the design and construction of a small storage barn for athletic equipment, yard vehicles and a sports concession stand. The students researched construction techniques and program needs, then priced materials, built a scale model, and finally constructed the barn.

Two physics students worked independently with the architect on a heat transfer/insulation study. After physically testing various insulation materials in a lab, they calculated the heat loss for a small dwelling. They also determined potential fuel-saving methods, such as orienting large windows to southern sun and using heavy drapery as nightime insulation.

In addition to working in class with teachers, the architect formed two mini-courses of his own which met during lunch hour. In the first course, "Graphics for the School," students planned signs, graphics and large murals for the school. The second course, "Student Design Workshop," began with awareness exercises. The students designed and constructed a student activity center in a corner of the cafeteria.



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Comment

The resident comments:

I found that teaching in high school is very hard work. I tried on all occasions to be conscious of the individual ability levels of the kids, to use a relaxed and non-threatening approach when I sensed a reluctance or insecurity on someone's part, and to keep an enthusiastic attitude even when a certain amount of intransigence was in the air.

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New Jersey

Resident/Site

Architects-in-Residence:
Daniel Brown and
Nancye Green

Roosevelt Elementary School
Roosevelt, New Jersey

Site: Rural
Population: 120 students; 5 faculty
Grade level: K-8

In-School Coordinator:
Lew Gantwerk, Principal

Residency/Resources

Both residents spent one day per week together and one day individually in the school. They worked with small groups and entire classes during class and after school, and occasionally on weekends.

There was a close school-designer rapport. Discussions, reviews and planning took place on a daily basis. The administration facilitated their interaction by approving a series of early closings on a weekly basis for teacher training.

Miscellaneous labor and materials were contributed by community members and $5000.00 was approved by Board of Education for materials.

Program

The intent of the residency was to revitalize the school, both physically and attitudinally, through the course of the 38-week residency. The school itself, as building and institution, became the focus of the residency, and of all of its activities and projects. They fell into five phases: 1) awareness, 2) design goals, 3) implementation/fabrication of systems, 4) hall design and 5) re-design.

Awareness activities included mapping rooms, listing activities and objects, making models of personal environments, and manipulating classrooms with existing furniture. Students made models of proposed room changes, including the design of learning environment support structures. Developed in this way, the design goals could serve as the basis for designing and building classroom furniture to solve perceived problems: primarily noise, clutter and functional inflexibility of furniture.

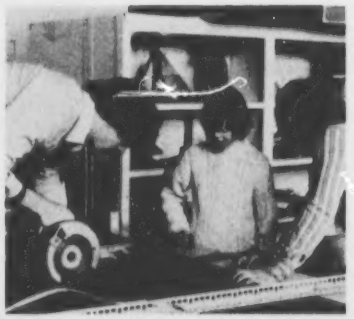
In the implementation phase, the six classrooms were painted, tri-wall private spaces were placed in classrooms for children's use, flexible components (homosote panels on metal frames) were designed and built to support the changing requirements of the classrooms, and a handbook to support the continued evolution of the structures was written by students and teachers.

All of these projects helped develop a sense of the ability to control the immediate environment, and from this students and teachers are developing a sense of stewardship over an important aspect of their daily lives.

The school's public space (a long, narrow, central hallway) was completed near the end of the school year, and provided an intense involvement at a time when students and teachers are usually winding down.

Comment

The intent of the project was to revitalize the school, both physically and attitudinally, and the community's involvement with it. Goals included providing tools for the school's community to look at its environment in new ways, to use it differently as different needs arise, and to understand and respect its relevance to the activities that take place in it.



Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **Phillip Danzig** Frank H. Morrell High School Irvington, New Jersey Site: Urban Population: 2500 students; 150 faculty Grade level: 9-12 In-School Coordinator: Dr. Elaine Raichle, Art Supervisor	This was a four-month residency; three days per week in regular classes in the art department to which students were assigned; after-school with the Architecture and Environmental Design Club. A fourth day every two weeks was reserved for assembly presentations. Community resources that were used during this project were the public library, the Chamber of Commerce, the Planning Office, Parks Department and Housing Authority. The Parks Department donated $500.00 to this project.	Introductory exercises in built environment awareness focused on the question, "What do you perceive on the way to school?" This permitted the architect to get a feeling about the students' degree of readiness and their familiarity with general content, vocabulary and so forth. It also permits students to relate to the architect on a subject in which they could feel comfortable. Such an exercise raises the student's awareness of the overly familiar. This discussion was followed by an exercise in writing directions for how to get to school from their homes without using street names. The next exercise was to map their paths to school, showing landmarks, districts, edges and paths, as well as sense impressions. A second unit, Understanding the Five Senses, was used to develop the awareness that perception of the objective world is made through their senses. They altered the light level of the room, burned incense and played drum music. They were asked if they perceived "anything different." Then they proceeded to exercises for sound, taste and sight. One of Danzig's classes worked on scale models. They began with drawings of the classroom and their own bedrooms and moved on to cardboard models of their rooms. These models could be "real" or as the student would like them to be. The students were enthusiastic about this project, meeting it with participation, persistence and inventiveness. Students used wood panelling and wallpaper, made patchwork rugs and so forth. Another group worked on murals. They began by doing small, scaled sketches. These were blown up to make murals on paper, and these were then hung in the room. Some of these were hung in the cafeteria on a rotating basis; the small sketches of the murals were placed on display in the lobby with the hope that students would see the connection between them (i.e., different scales, preliminary vs. final design). In a neighboring school the resident was asked to discuss with an eighth grade class the need for renderings. The resident also ran an environmental film series to present architectural and environmental subjects to students and faculty. Each program was introduced and a discussion followed the film.	The In-School Coordinator comments: The program provided cooperative group experiences and individually related ones in which one could be a participant in an effective creative process. It provided opportunities for the development of leaders, for creative uses of new materials, for completing high impact visual changes for a larger audience, for free expression, for learning to work within a community, for learning new technical skills and for the students to be exposed to a competent teaching-professional.

Resident/Site

Architect-in-Residence:
William Mikesell

Annandale Youth Correctional Institution
Annandale, New Jersey

Population: 600-1000 residents aged 16-29; 21 employees involved in educational programs

In-School Coordinator:
Roger Kell, Art instructor

Residency/Resources

During a four-month residency Mikesell spent 30 to 40 hours a week working with two activity groups. In this unusual setting, it was found that the team relationship with the art instructor was particularly helpful. The ISC (the art instructor) with years of experience at the institution contributed knowledge of the bureaucracy and access to the inmates.

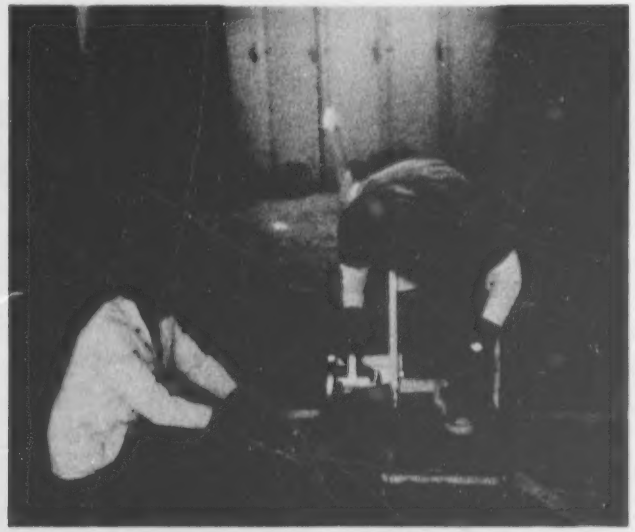
Outside consultants participated in this project: an architect (another AIS resident elsewhere) gave constructive criticism on techniques; another architect gave an evaluation of the projects being worked on; and there was another visit from an architect from the New Jersey School of Architecture.

Program

The participants in this program called it Project Self, a way of describing their perception of it as an opportunity to learn in proportion to the energy they contributed to the project. The resident had planned for a longer period of entry and orientation, but the inmates were eager to proceed with actual work. After surveying the building (a barracks-type "cottage"), they drew plans and listed activities that occurred in each area.

The participants (approximately 40-50) decided that the telephone room, previously a storage room in the basement, would be the place to redevelop. The room was small and in very bad condition. A sketch of the space was developed and a model was created. At the same time, the participants also chose to paint a mural and, when the design was agreed upon, that too was applied to the model. Permission was granted to proceed and construction began. At this point the number of participants doubled.

The project had an official photographer, one of the inmates, but other people learned to use the camera too. Looking at Annandale through a camera was a way of encouraging people to become more aware of their environment.



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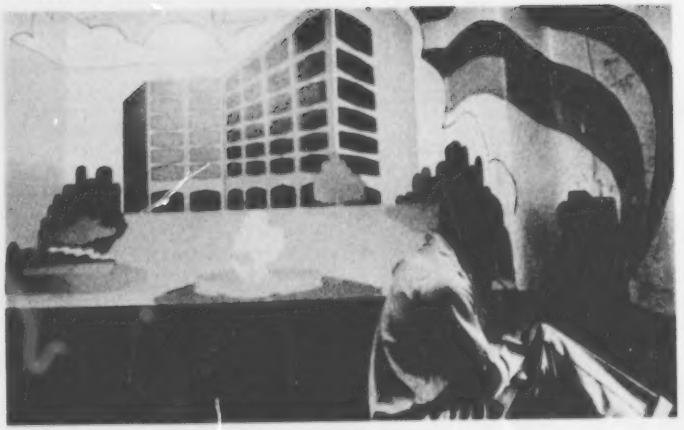
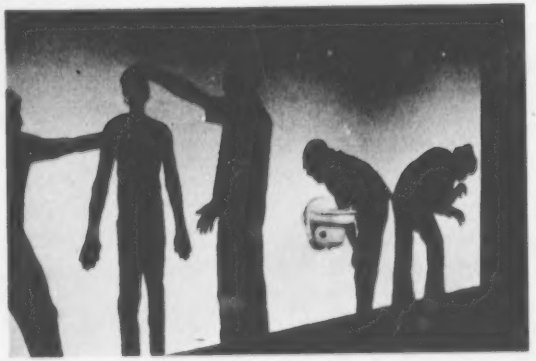


Meanwhile other projects were underway. Participants worked on a silhouette mural in an upstairs recreation room and one began to paint doors with supergraphics.



A later project involved a mural on the backboard of a handball court. The pattern selected was a geometric one, resembling a tunnel. A great deal of interest was generated throughout the institution because of this highly visible project.

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Comment

Here I am, 22 years old, and I have got to get into prison before somebody comes along to help me fix up my room.

— *Inmate at Annandale*

The resident comments:

In addition to students who learned a design process and how to use certain construction tools and equipment, many inmates began to look at their surroundings as places that could be improved. . . . Many inmates would constantly be walking up and describing some place that was lacking in any sense of place. Someone pointed out a dark stairway and said how the lighting was inadequate and with some supergraphics the small space could be pleasant and exciting; this man was really looking at things around him and thinking about them.

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Resident/Site

Architect-in-Residence:
Jerry Ohsfeldt

Central Elementary School
Las Cruces, New Mexico

Site: Urban
Population: 424 students; 17 faculty
Grade level: Elementary

In-School Coordinator:
Dick Schriver, Principal

Valley View Elementary
Las Cruces, New Mexico

Population: 21 students; 6 faculty

In-School Coordinator:
Fred Burgess, Principal

Project Coordinator for Las Cruces School District:
Mary Jane Wood,
Curriculum coordinator

Residency/Resources

This was a seven-month residency divided between two schools, three days per week. Activities were conducted during class time. The resident worked with language, reading, and fourth and sixth grade class teachers. Most of his time was spent in one school during this first year.

Community resources that were used included the public library and New Mexico State University.

The PTA contributed $200.00 to the project.

Program

The purpose of this residency was to enhance language experience, increase vocational awareness, promote awareness of the built environment and raise student-faculty morale. When informal discussion with teachers failed to raise their interest in the program, Ohsfeldt began to paint supergraphics in the hallway and main lobby. A highly visible project, it aroused a great deal of comment and interest and was, in itself, an informal learning process. Students stopped to ask him what he was doing, what it was and why he was painting it. Teachers, too, learned from the experience and began to use him as a resource in their classes.

The resident worked with students building structures from rolled and folded butcher paper; they learned architectural symbols and then measured their homes and drafted the floor plans of them.

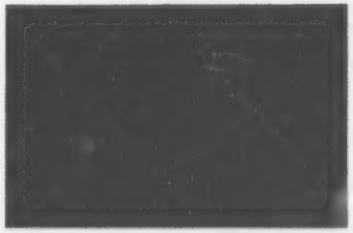
Another class surveyed the school yard and mapped and drew site plans of it. A vegetable garden was selected as a project and a site analysis was made to determine the location for it. Students planted the garden.

In classrooms, environmental changes began to be made. Long tables in both the classrooms and cafeteria were exchanged for smaller arrangements of tables and desks to encourage small-group interaction.

This resident also held a workshop for teachers.

Comment

As a result of this year's program, children, teachers, administration and parents have taken a new interest in their school and have saved it from abandonment.



New York

Resident/Site

Architect-in-Residence:
Alan Anderson

Rosedale Elementary School
White Plains, New York

Site: Suburban
Population: 300 students; 20 faculty
Grade level: Elementary

In-School Coordinator:
Bernice Steinman, Art teacher

Highlands School
White Plains, New York

Site: Suburban
Population: 150 students; 15 faculty
Grade level: Elementary

In-School Coordinator:
George Yanchik, Art teacher

Eastview School
White Plains, New York

Site: Suburban
Population: 8-16 year-old gifted children drawn from district

Project Coordinator: Ronald Topping, District Program Coordinator

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Residency/Resources

The residency was divided among three schools, the architect spending part of each week in each school, metting in two- to three-hour sessions.

Community resources that contributed to the project in some way were the City Planning Department, a beautification committee, the Parks Department, a senior citizens' group and local suppliers. Local experts in construction and design were used as consultants. Staff time and materials from the architect's own office were donated. The school system donated an additional $5000 for construction materials.

Program

Like several other projects, this architect-in-schools residency was structured around a defined product. In each of these schools a specific product was considered the end result, but in all cases the product was developed based on successive phases. The steps included discussion about the built environment, visits to an architect's office and a construction site, measuring and data collection, scale drawings, and model building of students' own rooms. This was followed by designing, model building, selecting materials, budgeting and finally constructing the new project.

At Rosedale, one team of students designed and constructed a frame and plywood reading corner in a classroom. The structure, which includes a loft, provides interior quiet space and exterior study carrels and bulletin boards.

The second team designed and constructed an overnight campsite in a woods on the school grounds. A modified, lean-to structure, it is of frame and plywood on cinderblock base, and will provide overnight shelter for 15 children. The third group designed and constructed furnishings for the school lobby, including benches, a aquarium and display space.

The fourth group's project was the creation of a sculpture garden in an interior courtyard. Students designed, built and placed redwood benches and pedestals.

At Highlands, students designed and were involved in the construction of a library resource center, a plywood and frame structure to house reading areas and a projection screen. The structure includes a loft reached by a ladder.

At Eastview, a mini-park for senior citizens was designed. Each child designed and developed a model for the project. Several of these were presented to the senior citizens and to the Parks and Recreation Commission and one was presented to the Common Council of the City of White Plains. Construction funds for the project have been approved by the city.

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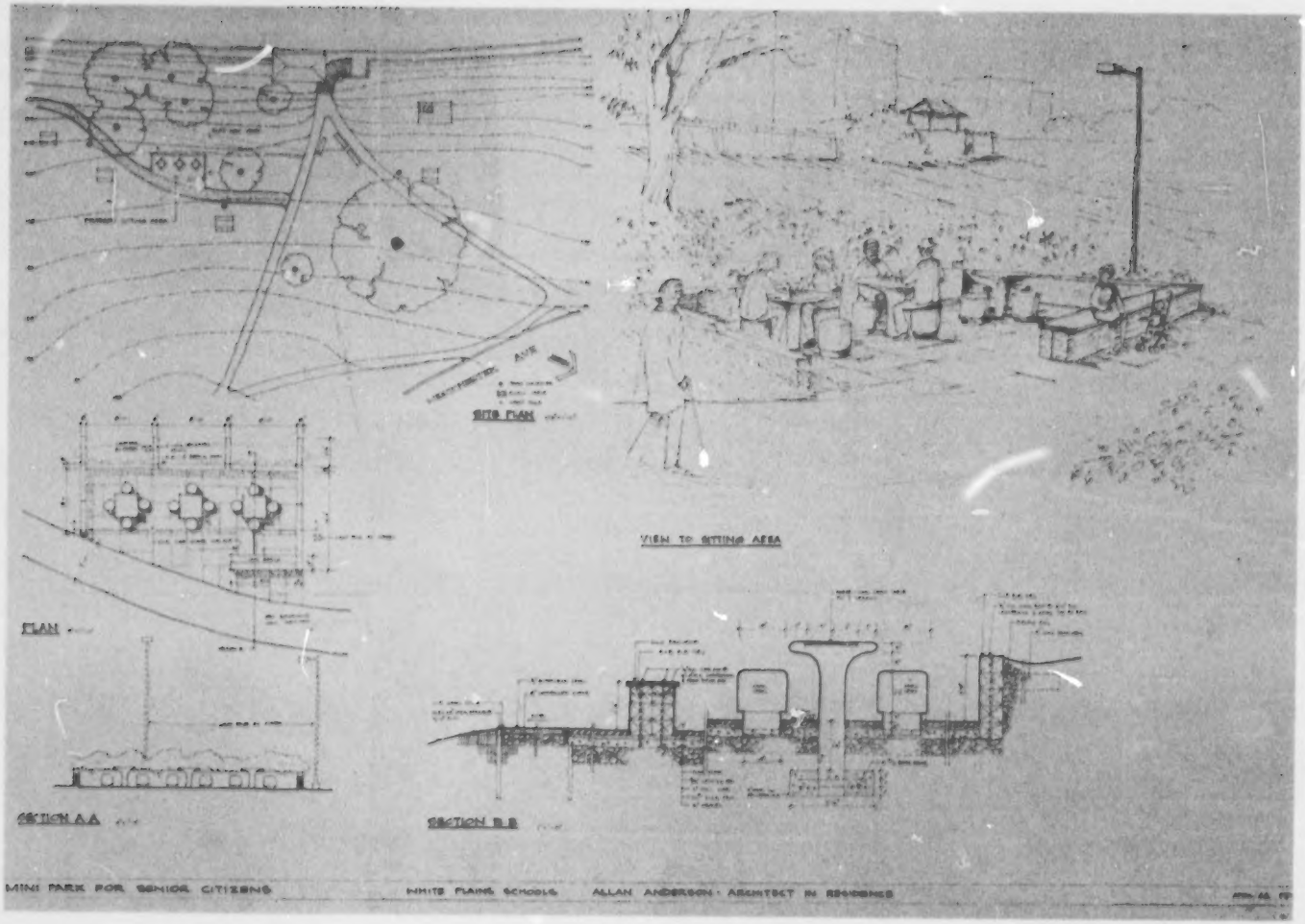

In addition to his work with students, the architect, together with another AIS (see Santillo) in the district, presented a series of in-service courses. The workshops consisted of presentations, discussion and projects that the teachers could implement in their classrooms.

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Comment

The resident comments:

Model making proved to be a difficult time for many students. If they were careless in taking measurements or making drawings — and many children are — parts wouldn't match; even windows and doors turned up in the wrong places.

Too much time was spent in actual construction of scale models; more time should have been given to design development and the construction phases. [As an analog to this, Anderson notes that children's spirits rose steadily in construction, an observation made by several other residents who were involved in large projects.]

The concept of direction (north, south, east, west) was surprisingly difficult for some of the children. Take nothing, not even what appears to be most basic, for granted.

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Resident/Site

Architects-in-Residence:
Harry Coccossis and
Carol Goldstein

Parley-Coburn
Elmira, New York

Site: Urban
Population: 500 students; 30 faculty
Grade level:
Middle/elementary

In-School Coordinator:
George Tremonton,
Principal

Project Coordinator:
Charlene Holland,
Chemung Valley Arts Council

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Residency/Resources

The residents worked with students three full days per week and a fourth day was for planning. Activities included both team teaching and after-school projects. The designers worked most closely with a team of seventh grade teachers. These teachers were used to working together to plan curriculum and activities, and they were able to introduce built environment easily because of the interdisciplinary approach. The principal, who was especially supportive, facilitated their approaching teachers with new ideas.

Cornell University was used extensively as a resource; it provided invaluable services such as the use of the slide library, an extensive library system, access to the cooperative extension headquarters, professor/professional involvement and duplicating services.

Four architects in the Corning/Elmira School System worked as a team. Each architect was closely identified with one school. This was based on the need for continuity in the schools and coordinated planning. The problem of identifying who was responsible in each school was avoided. But the team approach was invaluable in their estimation. The team was a forum for information and ideas, a sounding board for problems and a means to work with teachers toward common goals. (See also Linda Fritz and John Meffert.)

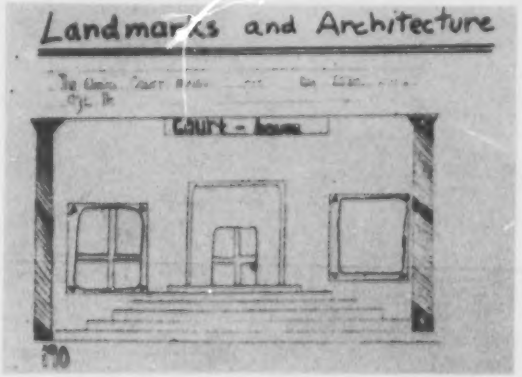
Program

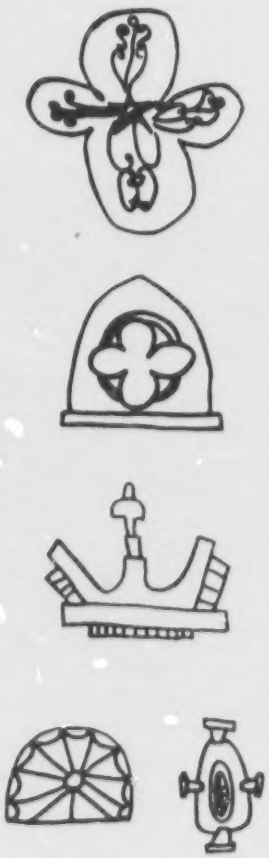
The emphasis in this residency was on integration of built environment education into the existing school curriculum. The architects-in-residence approached classes through lectures, discussion, slides, filmstrips, and other traditional classroom techniques. In art classes students focused on shelter. They viewed slides on housing forms throughout history, participated in discussions relating housing to climate, technology and materials; did scenario exercises on human needs; and designed houses of the future. A health class studied ecological issues and solar energy and housing.

The residents gave a slide presentation of Greek architecture to a ninth-grade English class studying Greek drama, stressing that the context of a given society can be reconstructed by looking at its architecture. To further illustrate this concept, part of the presentation covered modern, vernacular architecture.

Social studies students learned about the city as a place of exchange of goods and services. They viewed city plans and modes of transportation throughout different historic periods, looked at the modern city, and discussed slides showing alternative forms of transportation and their impacts on the city. Students followed this up with writing essays on the city of the future.

Other aspects of the city — its physical and esthetic qualities — were also studied by social studies classes through city planning exercises, map interpretation, slides and sketches.





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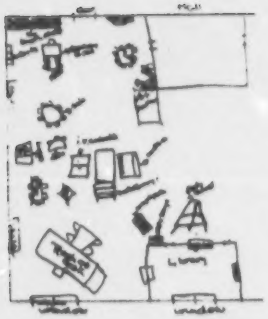
Describing Our Class Room



Feelings
Hot-summer
Cold-winter
Small
Crowded(to the old classroom)
heat
Light

Ornaments
Plants
Posters
orange and yellow Paint
orange rugs
Bulletin Boards
student drawing

PHYSICAL
Chairs
tables
coat Rack
Garbage can
Chalk board
Heaters
Books
tetetray
Shelfs

Dexter
Ralph

At HAGHRMAN'S
One of the things we like was the lawn at Hagerman's. It was smooth with no weeds and shaded. Some people wished they could have had a picnic there, but it was a funeral home. Hagerman's is on the corner of Pa. Ave. and Franklin St.

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The residents held a two-day workshop on architecture, "Why Buildings Don't Fall Down." Interested students signed up and participated during study hall periods. They explored different building types and principles — domes, shells, arches, bridges, suspended roofs, tensile structures, skyscrapers, and cantilevers. They discovered how structure, energy, materials and new technology affect decisions. On the second day, students constructed a model of a particular building type for some real location in their city.

Outside of regular classes the architects involved students in a project that resulted in a specific physical improvement. Two groups worked with the band director and the residents to study acoustics in building design. Their study culminated in an actual change in the auditorium through sound design improvements, using cartons, egg crates and drapes.

This team also became involved in several community activities. Because of their work on the new neighborhood community center in one wing of the school, they were able to participate in the planning of parent/student workshops, adult education courses and student slide shows, a neighborhood walking tour for opening day activities, and a summer youth program based on the AIS concept.

Comment

The architects-in-schools comment:

What really matters is not the product orientation nor the acquisition of skills to design the environment, but a good understanding of the interplay of the underlying forces.

People create their environment and subsequently are affected by it in their everyday living.

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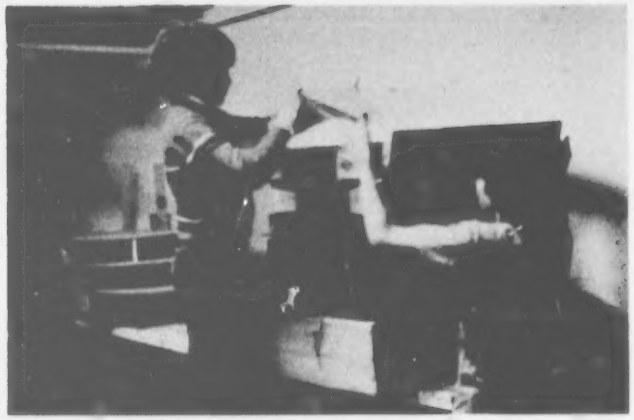
Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **Linda Fritz** Painted Post Middle School Painted Post, New York Site: Small town Population: 520 students; 36 faculty Grade level: Middle 5-8 In-School Coordinator: John Vine, Principal	This resident worked three days in the school for 24 hours per week, working with a core-subject team of five teachers. She also worked with the art and home economics classes. There was daily contact with her in-school coordinator. Community involvement included the Village Hall Department; the Chemung Valley Arts Council and the Southern Tier Regional Planning Board. (See note at Coccossis.)	The seventh grade science class learned about using nature to create and conserve energy within the built environment by studying the basics of a simple solar heating system within a house. Their study included a visit to a "solar" house and a talk with the architect who designed it. One art class viewed slides, found textures around the school and did gravestone rubbings in order to become aware of the richness and variety that texture can add to the built environment. Another art class studied how signs and lettering convey messages about the environment. Two social studies classes used architecture to study history and society. In one case, slides were used to illustrate and promote class discussion of the events and lifestyles of American society after the Civil War to 1900. Another class studied pictures of houses and drew elevations of their own houses in order to recognize different styles of colonial architecture, particularly rooflines, and to understand how colonial architecture was a reflection of European heritage and adaptation to a new environment and building materials. Other social studies classes explored their immediate built environment. One class worked on how to change the environment to better suit our needs. The difference between needs and desires was discussed and floor plans of the classroom, showing different desk arrangements, which could affect activities and behaviors, were drawn. Another class made field trips to various buildings armed with specific questions to answer. Students made sketches and drew site plans. In an English class, students studied the physical character of regions, and one's perception of place. They "read" the built environment through viewing and discussing slides of their own town, other American cities and many foreign countries.	The resident comments: Kids who were rather non-productive in the classroom became really enthusiastic when I put a camera in their hands and went with them to shoot slides of Painted Post's old homes or new architecture. And in the classroom, as they presented their work, they were well-organized, lucid and quite proud of themselves.

Resident/Site	Residency/Resources	Program
Architects-in-Residence: **Paul Heyer** and **Deborah Snow** Fiedel School Glen Cove, New York Site: Suburban Grade level: Pre- through middle school In-School Coordinator: Roslyn Fiedel, Executive Director Glen Cove High School Glen Cove, New York In-School Coordinator: Florence Andresen, Acting Principal Landing School Glen Cove, New York Grade level: Elementary In-School Coordinator: George Priest, Principal Project Coordinators for Glen Cove schools: Ivan Fiedel and Roslyn Horn Fiedel	Heyer worked one day per week at Fiedel and one day at Glen Cove. Snow worked four days per week at Fiedel, Glen Cove and Landing. Heyer worked with middle grades at Fiedel; Snow worked with kindergarten and elementary levels at Fiedel, and combined fourth and fifth grades at Landing. Both residents worked with students from various classes one afternoon per week at Glen Cove.	At the Fiedel School pre-schoolers worked with blocks to learn basic concepts: "inside" and "outside;" "tiny" and "small." The whole class gathered together inside of a block structure to define "large." They also made block structures for different uses, such as sitting, talking in a group, taking a nap and so forth. To tie in with the unit the class had just studied, the ecology of the pond and shore, and to begin to explore personal territory in physical terms, the third and fourth grades at Fiedel built a village of huts from indigenous materials. They scavenged materials found on the school grounds to create two-, three- and four-person outdoor enclosures. This activity has also spun off model building of native Indian dwellings and drawings of various buildings, space stations, doll houses and so forth. The Fiedel kindergarten class also built gerbil mazes, as a rudimentary exercise in enclosure. If the enclosure were not complete, the gerbils would find a way out of it. This was also an introduction to woodworking techniques for the kindergarteners. The architects-in-schools also engaged the students of the kindergarten, first and second grades, and the middle school in activities more directly related to their own environment: defining their personal boundaries within a class by physically indicating them with a piece of string, then drawing them on a map of the classroom. Discussions about territory with the middle school class led to an awareness that some private spaces were needed within the classroom. The students began to plan and build a loft in their room for such purposes.



Middle school classes were involved in developing an entire built environment for a city of gerbils. They discussed the needs of gerbils, drew utopian gerbil habitats, and planned their designs for a working scale model city. Each student built his own element on a homosote base which fit together with other bases.

The kindergarten class at the Landing School focused its activity on the socio-dramatic play section of the classroom. The current theme for the class was cycles. The cycle of planning, building and using the dramatic play area was repeated several times during the year for different functions. The children made decisions, learned to use the material to make their dramatic play area "say" what they needed, and used the space appropriately.

The architects-in-schools worked with the fourth/fifth grade class at Landing in its social studies unit "Along the Oregon Trail." In conjunction with this subject, the architects assisted the students to build a covered wagon space for the classroom to recreate the cramped quarters that the Oregon pioneers had to live with. The space has now been converted into a quiet reading area, a space apart from the rest of the classroom, yet open to it. Their next step was to look at the territory as it was found by the pioneers and how land was divided among them. The children then actually built up settlements at model scale on a relief map that they made. The whole unit fostered interest in creating stories, building scale models of pioneer dwellings and equipment, drawing maps of the area and, in creating a four-minute animated film with synchronized narration and music about the trip westward.

At the Glen Cove High School, the architects-in-schools worked with the home economics class. The attempt was to have an immediate impact on the school through the transformation of the home economics class's institutional setting into one which encourages the students to personalize it, to give warmth and texture to it, to use space thoughtfully and to begin to break up the "barnlike" interior.

Proposed projects are to turn a barren courtyard into a sculpture court and horticulture laboratory and a dismal lobby into an information, welcoming and meeting place.

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Comment

At the Fiedel School, with its emphasis on creative problem-solving, the architect found he was able to use basically the same teaching process and vocabulary that he used with his architecture students at Pratt.

Teachers noted a gain on the part of students in levels of abstraction and problem-solving ability. The children's free block play began to take on architectural form and dimensions; they were concerned with building environments rather than solely creating fantasy combinations.

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Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **John Meffert** Northside-Blodgett Middle School Corning, New York Site: Urban Population: 500 students; 30 faculty Grade level: 6-8 In-School Coordinator: Thomas Madigan, Principal	This was a three-month residency; two mornings per week were spent in participating in an 80-minute unified studies program; afternoons and one additional full day were used for special projects and involvement with other classes. There was daily contact with the in-school coordinator. Meffert involved students, teachers, alumni association and other community groups in a celebration of school's 50th anniversary. Community resources used were Corning Glass Works, Market Street Restoration Agency, Southern Tier Regional Planning Board and Chemung Valley Arts Council. (See note at Coccossis.)	For a World Cultures class, sixth grade children viewed slides on architecture at different times and places and studied relationships between various styles. A seventh grade social studies group did a unit on city planning. Activities included discussion, mapping, community awareness exercises and a field trip to the downtown area. English students studied advertising and signage in the built environment. Students in other classes worked on the concept of personal space: one class designed personal spaces; another worked on planning a house together. Floor plans and elevations were drawn; models were built. The architect-in-school also worked with individual students on specific projects related to other subject areas. The resident worked with the eighth grade teacher on a Futures unit. Students organized themselves into different interest groups. They were presented with a problem concerning their town and developed solutions.	The resident comments: In our evaluation sessions at the end of the year, the teachers expressed a strong desire to use the Architects-in-Schools program in their curriculum development next year. They are also strongly in favor of hands-on projects. I feel that the climate has been set for next year and the teachers are open to the idea of working with the architect.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **Frank Santillo** Mamaroneck Avenue School White Plains, New York Site: Suburban Population: 455 students Grade Level: K-4 Rosedale School White Plains, New York Site: Suburban Population: 194 students Grade level: K-6 Highlands School White Plains, New York Site: Suburban Population: 213 students Grade level: 5 and 6 In-School Coordinator: Ronald Topping, District Program Coordinator	This residency was split between Mamaroneck and Rosedale Schools during the year. During the last 5 weeks of the school year, the architect worked at the Highland school. The architect spent 12 hours per week at school during the residency. The architect worked in classes and conducted his own class on built environment; he also worked with students outside regular classes on special projects.	The overall objective of this residency was to build a new architectural awareness in students and teachers, beginning with things closest at hand and then expanding into different and unfamiliar environments. Working with lower elementary school grades, a systematic step-by-step approach was used featuring hands-on projects that could be completed in a single session. Topics were selected because they coordinated with curriculum on the school environment. The first series of activities took place in the classroom. Beginning with room plans and drawings, discussions were held which dealt with reactions to known spaces (bedroom and classroom), including color, temperature, function and so forth. These discussions led into activities to redesign classroom spaces, eventually involving all the students in the lower grades. Other in-class projects focused on classroom pets. They discussed the needs of the guinea pigs, developed a program for the design of a habitat, and finally, designed and built a habitat which met the needs of the pets as well as the needs of the students and teachers (visibility, sanitation and so on). Birdhouses and feeders were also designed and built following the development of a program. Occasionally, the architect-in-school made presentations about architecture that were particularly appropriate to a class unit; notably colonial architecture and the architecture of the city. Presentations of this kind led into the building of models, the design of fantasy houses, tree houses (an offshoot of New York's high-rises) and colonial settlements. A second phase of the residency involved students out of the classroom with larger school spaces: hallways, cafeteria and, in one case, a giant basement classroom where Human Relations classes met. Murals were painted, traffic flow was controlled and a small stage for play rehearsals was built. This resident together with another architect-in-school (working in the same school system, see Anderson) conducted an in-service, 10-hour teacher training course for 19 teachers.	The resident comments: Keep the time framework short, crisp and stimulating. Work within the age group ability but always allow for the individual mind capable of taking on more. Perhaps breaking a classroom into several interest groups wherein the teacher and architect can move about and make direct one-to-one contacts. With the lower elementary grades, I find that systematic step-by-step "hands on" projects, preferably those that can be completed in a single session, seem to be best. Intercommunication between the architect and teachers is a must.

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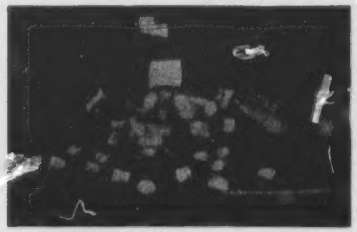
Resident/Site	Residency/Resources	Program
Architect-in-Residence: **Howard Wolff** Public School 14 Troy, New York Site: Urban Population: 554 students; 32 faculty Grade level: K-6 In-School Coordinator: Frank DeFrank, Principal Maple Hill High School Schodack, New York Site: Surburban/rural Population: 560 students; 35 faculty Grade level: 8-12 In-School Coordinator: Michael Nagle, Principal Algonquin Middle School Averill Park, New York Site: Suburban/rural Population: 852 students; 55 faculty Grade level: 6-8 In-School Coordinators: Jack Thero, Principal; Jim Wabnitz, Art teacher Project Coordinator: Mary Stiers	A full-year residency divided among three schools; half year in School 14; half year in Maple Hill; a four-week break during the second half of the year at Algonquin. The architect presented himself as a resource to teachers who could share experiences in teaching about the built environment and help them with the integration of content into their individual programs. He was available to them through workshops and individually during office hours. Wolff brought in students of his at Rensselaer Polytechnic Institute. Each student was paired with a teacher and spent three hours in classroom per week. Funds for this project were provided by community groups and businesses.	In each school, the architect-in-residence gave a slide presentation to teachers, explaining the nature of his residency and the. worked with teachers who expressed an interest in this program. During the year he conducted teacher training workshops and many of the activities outlined here were used for both teachers in training and for students in the classroom. Generally, Wolff worked with teachers as a team. Activities aimed at heightening observational skills included photography, eating lunch blindfolded, looking out a window for objects not noticed previously and describing them, and exploring a familiar object (for example, an apple) in order to describe its unique qualities. Activities aimed at increasing awareness of spaces and places included discussions of how buildings communicate; experiencing the school environment with a handicap — blindfolded, on crutches, or in a wheelchair; and manipulating spaces through using movable partitions to create qualities such as privacy, crowding, and so on. Some activities were built around questions. Why do structures look the way they do? Why do people build shelters and how are the designs affected by climate, materials or cultural factors? How do buildings and shelters form a community? Various types of construction were investigated and structures were built with straws and pins, toothpicks and marshmallows (three-day old ones), sugar cubes and glue. Structural principles were discovered by building with bodies. Students felt what it's like to be a beam, an arch or a column. Students in a sixth grade class studying people in different lands researched and built models of various kinds of housing around the world. Model buildings were arranged into communities. A social studies unit looked at neighborhoods and the growth of cities and went on walking tours to learn more about their own neighborhoods and the city's historical heritage. Students and teachers focused on the school environment. They measured various spaces, drew floor plans, made study models and analyzed the use of spaces. Some classes made changes within their classrooms, tri-wall structures were especially favored.



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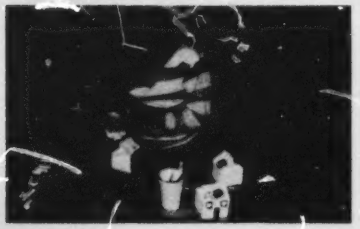
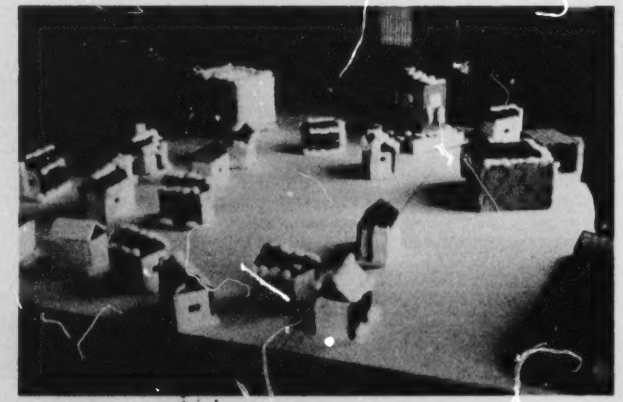




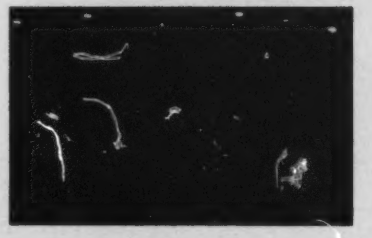
A two-week Futures unit (preceded by a two-week planning/consultation period) was designed to get students involved in thinking about and experimenting with alternative housing environments of the future. In this unit, groups of students received scenarios describing specific situations in the year 2002: no land for housing; shortage of traditional materials for shelter; need for portable housing for the moon. They began the unit by exploring their fantasies about the future. After seeing slides about inflatable exhibit spaces, greenhouses, sports facilities, camping spaces and even army installations (while sitting inside an inflatable built by teachers during a workshop), students began to experiment with small plastic bags and dry-cleaning bags, studying the structural qualities of inflatables and their potential uses.

The home economics class in the same school decided to improve the room. They determined what they liked and didn't like about the room and agreed upon what changes they would make. Because they needed administrative approval, they decided to build a scale model of the room. Spaces were analyzed for use. Students came up with suggestions for improving the efficiency of the layout. The students raised money for this project by sponsoring a car wash.

At Maple Hill, Wolff worked with the environmental studies class. Students who were planning a nature trail as a class project were led to see that their product would be considered part of the built environment even though it was composed mainly of natural elements.

Students in art classes expressed an interest in improving the school's environment. To broaden the students' awareness of the range of possibilities, Wolff put together a slide presentation illustrating graphics on floors, ceilings, walls and stairwells. Though the tendency was to start painting immediately, students progressed from conceptual ideas to rough sketches to color studies to refined sketches to scale drawings. Then students built scale models of the various locations in the school being considered for graphics and the artists fitted their drawings into the models to see what the murals might look like when completed.

In addition to this and other painting projects (graphics, signage) within the school, some of the students were involved in



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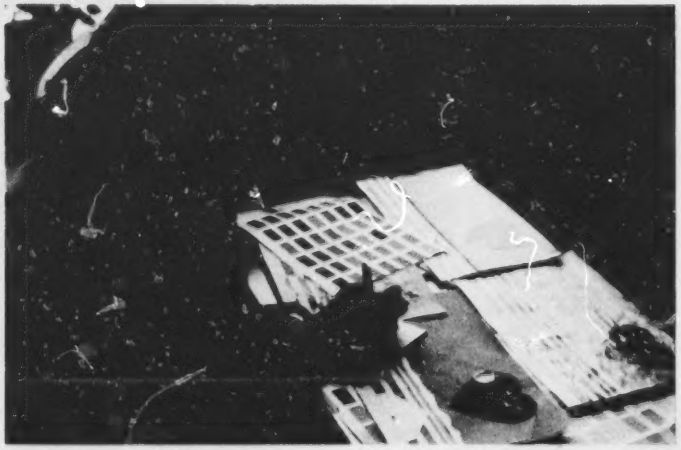
improving a baseball field in the neighborhood. The art class was commissioned by local merchants to create billboards to be displayed on the fence. Students were free to come up with their own design and many of the billboards were not only effective pieces of advertising but esthetically pleasing too.

In science, students were studying about the structures of the earth. The problem was posed: How would you design your house if it were built on a fault line?

In geometry the resident and teacher developed hands-on exercises to explore how to make structures rigid (i.e., how to prevent a square from becoming a rhombus) and how to prevent failure in designing columns, beams, arches and domes. Strips of cardboard, paper, tubes, yardsticks and egg shells were used to demonstrate these properties.

Here, too, students in the art class became involved in making inflatable structures. Rather than constructing one for its own sake, it was decided to design one as an exhibit space for display at the RCCA's Arts and Crafts Festival. Two inflatables were turned out.



Comment

The resident comments:

When you practice architecture you facilitate or erase the possibility of something happening between people and spaces.

Teachers need to know how they're doing and to know (be assured) that what they're doing is worthwhile.

I'm not lecturing to anybody. I'm helping teachers discover new ways to do things with their kids.

Resident/Site

Architect-in-Residence:
Bruce Grulke

Marion Franklin High School
Columbus, Ohio

Site: Urban
Population: 1600 students; 75 faculty
Grade level: Secondary

In-School Coordinator:
Phil Arena, Art teacher
Hank Russell, District Arts Supervisor

Residency/Resources

The resident architect spent 30 hours a week in the school and was available every day. Projects were planned to fit within as many different classes as possible. Spanish, sociology, urban studies and shop teachers were especially involved. There was little interest on the part of the principal or the rest of the school.

Outside community involvement and support came from the Civic Association, local businesses and industries, civic groups (such as the South Kiwanis and the Southside Optimists), Ohio State University, Ohio Historical Society and the Easter Seal Foundation.

Program

The architect worked to enhance the current urban studies program, making the students more aware of the built environment and the economic and political forces that shape it. He hoped to demonstrate that to understand and use the political system is a means to improving the physical environment. Aerial photos and urban atlases were used, introducing students to the function and physical relationships of the entire city and region. An urban score was developed that emphasized the internal structure of downtown Columbus. Most students, he found, were caught up in their home spheres and scarcely recognized the physical barriers of their own neighborhoods.

A group of art students painted one of the school hallways; industrial arts students worked on designs for simple furniture and then built the models for those designs; other students studied model making, graphics and architect's tools.

A two-day program involved the entire school. The subject was "Architectural Barriers." The purpose of the program was to develop sensitivity to the problems encountered by the handicapped student in the school environment. Physically-able students in wheel chairs followed a route set up by handicapped students. Students were asked to annotate elements of the building that would hamper usage by the handicapped and those elements that would allow free access to all.

Several activities were focused on changing the physical environment of the school particularly the courtyards. Creative Courtyards Unlimited, as the project became known, linked several activities. Students made "A Statue of Me," of cloth and plaster construction, each indicating through gestures and poses an activity that could take place in the courtyard. Furnishings and areas for different functions were designed and a landscape architect helped them pull their separate parts together into a design for the whole space. This project was particularly useful as one that involved a large number of students.

Another courtyard improvement was focused on the play area for the high school's child care training program. One group of students worked on creating a play area for the young child. Students and teachers were asked to make a list of activities and desired learning experiences. They studied the relationship between the physical environment and behavior and how learning can be affected by the physical environment.

Comment

Students from Marion-Franklin High School wandered around Downtown Friday armed with maps, inexpensive cameras and the goal of learning about the buildings and their use. For five students on the tour it was their first trip Downtown.
— The Columbus Dispatch

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Resident/Site

Architect-in-Residence:
Rodney Armstrong

Roosevelt Jr. High School
Tulsa, Oklahoma

Site: Urban
Population: 460 students
Grade level: Middle school

In-School Coordinator: Beth Cowan, Vocal, Music and Piano Lab team teacher

Project Coordinator: Harley Manhart, Education Director, Arts and Humanities Council of Tulsa, Oklahoma, Inc.

Residency/Resources

This was a six-month residency. The architect spent 17 hours per week in the school. Activities were conducted during class time; individual projects were worked on in the design studio outside of regular classes. This architect worked with social studies, art, homemaking, music and science teachers. He met with teams of teachers on an ongoing basis to discuss how he might best work into their schedules and meet with their classes.

Special funding came from the Tulsa chapter of the AIA which also donated materials.

During the spring preceding the residency, the architect visited the schools several times to familiarize himself with the environment, the students and the teachers. This gave him the opportunity to explain to the school what the purpose of his residency was and how he might be helpful to the school community.

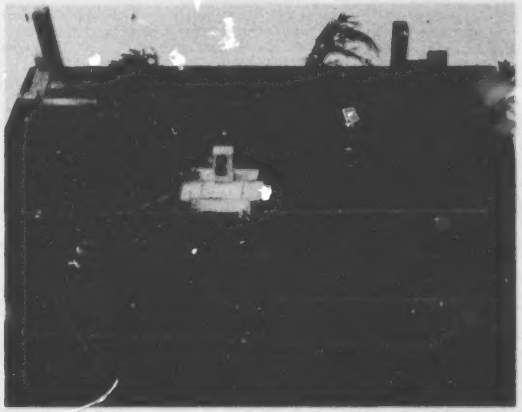
Program

There were many different kinds of activities taking place during Armstrong's residency. The architect worked with several classes. He led an eighth grade special education class on an awareness tour of the park that surrounds the school building. They began by walking in the direction of the wind, walking in shadows, and generally sensing the environment. They followed this with a discussion of what improvements they would like to see in the park.

The speech and drama class worked on role-playing in community planning situations. Students were assigned the roles of mayor, developer, resident, architect and so on. This led to the writing of a one-act play recreating the different points of view that came into conflict over the preservation of the Tulsa Union Station.

Students enjoyed several field trips. A communication skills class visited the oldest house in Tulsa and then wrote their descriptions of what it might have been like to live in the house at the time it was built. Other trips were to a high-rise development, a new high school, and a new city park on the river.

Students enjoyed, too, activities that led to model building. Two eighth grade classes in economics were lectured on city planning by the architect. Then student groups were formed to represent different community interests: residential, commercial, institutional, and educational. They drew designs and built models which reflected the various planning concerns.



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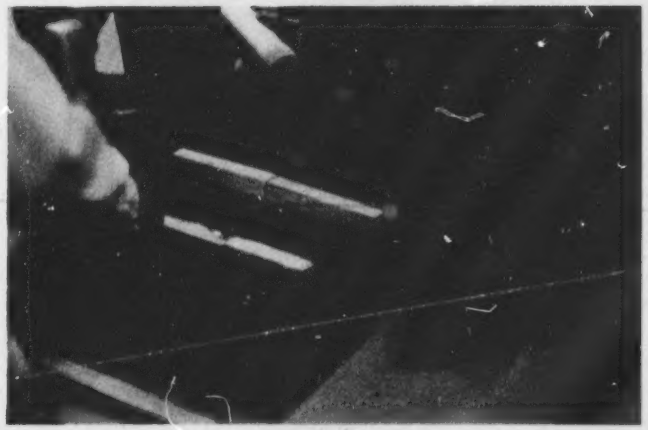
Continued

Many students simply came to the design studio to work on individual projects. The resident required that they draw their sketches first, and then build the models. Many students would have preferred not to draw but it is an important step in the conceptual process. They built everything from hot dog stands to baseball parks to solar cities.

Students changed their classroom environments. One group painted a classroom. A more involved project was worked out in the music and piano lab where students and music teacher redesigned the space to function more appropriately to their special needs. This project involved visiting another remodeled school space at a local college, designing and building a model. The space created was interesting but overly ambitious. They were unable to follow through on some of the improvements. In the end, they succeeded in constructing a carpeted, modular stage for the lab.

Two of the most successful projects involved construction of two very different spaces. One group of students designed and built an inflatable polyethelene house. Color sketches were made on butcher paper indicating size, shape and color. Large, pillow-shaped rooms were connected by tube-shaped corridors. Construction was completed in one week and many students from different classes participated. The final product consisted of about 1200 square feet of enclosed, ventilated space.

The largest and most time-consuming project of the residency was the design and construction of an outdoor classroom. The Science Club surveyed the grounds, chose the site, took measurements, constructed scale models, and built the structure with the help of the architect and a science teacher. The structure was built of railroad ties, stair-stepped up an incline, each level filled with patio blocks on sand. This was immediately destroyed by vandals. Undaunted and still enthusiastic, the students reconsidered the materials they had used. The concrete blocks were replaced by poured concrete, and redwood boards for seating were installed. The space was a success after all. And the students learned an invaluable lesson about planning and changing one's own environment.



Comment

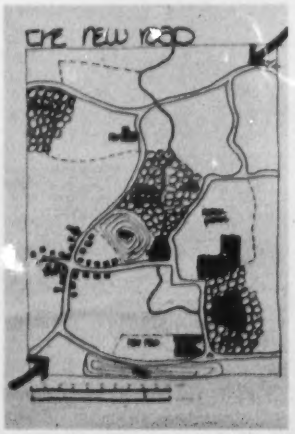
The resident comments:

Some of the biggest successes and worst failures were in the area of individual projects. By individual projects I mean those which students worked on independently of others and outside their regular classes. . . . Most of these projects consisted of cardboard models and drawings of houses, buildings, parks and cities. Kids love to build models. They were required to sketch their ideas on paper first and then build the model. They were much more interested in building than drawing. This age group needs close supervision when working with mat knives and scissors. One student cut his finger with a mat knife. I tried to limit the number of students in the classroom to four or five after that.

About the program's definition: The desire for broad exposure conflicted with extended contact with smaller groups of students. Access to students was not facilitated.

If you promise them [students] something you must follow through with it or they won't let you forget it.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **Jill Morelli** Holland Hall Upper School Tulsa, Oklahoma Site: Urban Population: 260 students Grade level: 9-12 In-School Coordinator: Robert Cain, Psychology teacher	This was a seven-month residency; 25 hours per week. This resident worked as team teacher, as a resource person for other teachers, and taught her own course in the built environment.	As an entry-level activity, the architect-in-residence and ISC took a series of 10 photos of details of little-known areas of the school and grounds and mounted them on a poster. Students were asked to identify the location of the detail and place an identifying mark on an accompanying map of the school. Students were then asked to stump each other with similar photos. Also during the early phase of the residence, the architect built her own desk in the art room, attracting much interest and offers of help from students. The architect worked as a resource person with a middle school social studies teacher to develop an indigenous architecture project. This produced written reports based on students' investigations of local culture. Following this exercise there were discussions on seeing the built environment. Another activity was conducted with an art class. Students were asked to investigate personal living space and design this space on paper and in three-dimensions. They were asked to keep a diary of different spaces they entered and how they responded to each. The architect's built environment class focused on mapping, a score, city design and neighborhood investigation. 	The school used the resident as both a teacher and a resource person. She conducted an adult education class for parents and staff which was an extension of her work with students on the built environment.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: **Eric Overland** Booker T. Washington High School Tulsa, Oklahoma Site: Urban Population: 1146 students; 68 faculty Grade level: Secondary In-School Coordinator: Darrell Goode, Fine Arts Coordinator	Residency was for six months, five half-days per week. The resident worked in regularly scheduled classes as well as scheduling projects for two free activity periods per week. Teacher contacts were with social studies, English and architectural drafting teachers. The local chapter of the AIA contributed funds and presented a slide documentation, "How Architecture Speaks."	In this residency the architect-in-schools was essentially a resource person for existing classes. He participated in three major areas: architectural drafting classes, interior design classes and in urban studies courses, called "City." He used films and slide presentations to introduce the work of Frank Lloyd Wright, the education of an architect, and the various aspects of urban areas — their esthetic qualities and the economic and political factors that influence them. One activity had students plan a route of a highway through a region, weighing monetary costs against environmental costs. Another presented the floor plan of a small, family house and students are asked to plan alterations that respond to the family's changing needs.  The resident worked with the drafting class on structural design problems: constructing a bridge of paper and glue that would span 18 inches while supporting a brick; using only toothpicks and glue to build a protective container that allows an egg to be dropped from a height of six feet. He also conducted students on field trips to downtown construction sites and renewal projects and to architecture firms.	Because he was often approached by teachers wanting to make improvements in their classrooms, the resident felt that ideal locations for residencies would be in those schools which have immediate plans and available funds for renovation or improvement. Learning activities could then be developed around the planning process. Students, faculty and administration could be involved in a very real and tangible way in the future of their school.

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Resident/Site

Architect-in-Residence:
John Perry

Washington High School
Portland, Oregon

Site: Urban
Population: 817 students; 57 faculty
Grade level: Secondary

In-School Coordinator:
Bette Windes, Arts Department Head

Residency/Resources

This was a six-month residency, 30 hours per week.

The neighborhood association and the Portland Neighborhood History Project were local resources that were consulted. Members of the Portland AIA chapter were on the Advisory Committee that oversaw this program and a review of the AIS residency to the Portland Chapter at the conclusion of the program. Four architects, each an expert in a specific area, made class presentations and representatives of the local transit authority also met with classes.

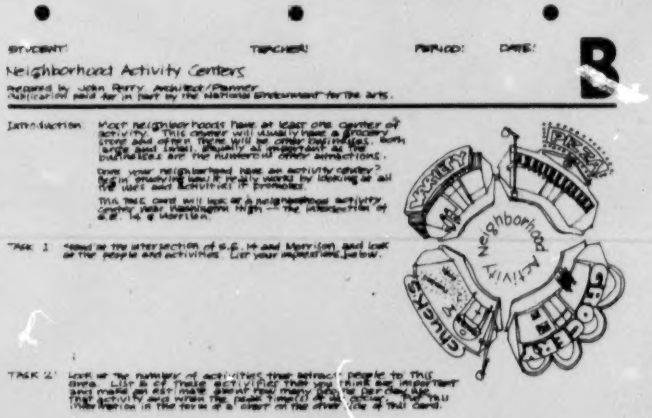
Program

The Buckman Neighborhood Discovery Program was intended to use the neighborhood as an outdoor classroom. The program was a 13-day unit that included tours, classroom discussions and assignments, and neighborhood assignments and activities.

Maps of the neighborhood from different periods were used. Using the 1897 map, for example, students were asked as a classroom activity to imagine the neighborhood at that time; to imagine they were real estate agents for a particular piece of property; to prepare a poster or brochure that would advertise the property describing all its best features and those in the area.

A neighborhood activity would be to walk the neighborhood until something was found from that period; a visual record was to be made. Students would learn about history, civics, housing, transportation, and of course, map reading, recording information, interpreting and formulating conclusions.

Perry prepared maps and worksheets for this project. The worksheets include an introduction and various tasks, such as things to find and things to do. Students were asked to look at their surroundings and think about why they were as they were.



STUDENT: TEACHER: PERIOD: DATE:

B

Neighborhood Activity Centers

Prepared by John Perry, Architect/Planner
Publication paid for in part by the National Endowment for the Arts.

Introduction: Most neighborhoods have at least one center of activity. This center will usually have a grocery store and often there will be other businesses, such as a bank and hotel. Usually all streets lead to this business area. The numbers are the numbers of bus connections.

Does your neighborhood have an activity center? One way in studying it is by looking at all the uses and activities it provides.

This task card will look at a neighborhood activity center near Hawthorne High — the intersection of S.E. 14 & Morrison.

TASK 1: Stand at the intersection of S.E. 14 and Morrison, and look at the people and activities. List your observations below.

TASK 2: Look at the number of activities that attract people to this area. List in order the three activities that you think are important and make an estimate of how many people per day are in this activity area. When the peak times of the day are? Do you think location in the form of a street car line (like at this corner) is important?

Comment

Perry placed emphasis on developing materials so that the teachers themselves would conduct neighborhood tours. Because task cards for discovery tours around the school were produced for use by the teachers, it is expected that when the architect leaves the activities can be carried out.

South Carolina

Resident/Site

Architect-in-Residence:
Steve Goggans

Salem Elementary School
Salem, South Carolina

Site: Rural
Population: 200 students;
13 faculty
Grade level: K-6

In-School Coordinator:
Vicki Walker, Teacher

College Street Elementary School
Westminster, South Carolina

Site: Small town
Population: 350 students;
17 faculty
Grade level: 5-6

In-School Coordinator:
Brian Jenkins, Principal

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Residency/Resources

This was a split residency. The architect worked at two schools for four days per week throughout an eight-month period. Goggans worked with small groups in regular classes, usually with teachers who had the most flexible schedules and those that were interested in including built environment education in them.

A committee which included teachers, the ISC and the resident, was formed to lend continuity, help identify resources and perpetuate built environment education in the schools.

At College Street five garden clubs, the County Highway Commission, the Public Utilities Commission and a local building supplier participated in and/or contributed to the school project.

Community involvement at Salem was slight. Teachers and children live out of town, and the sense of community itself is limited.

Input was provided by several faculty members from Clemson University School of Architecture and Fine Arts; and the program was observed by graduate education students.

Program

The first few weeks were spent getting to know the administration, developing rapport with teachers, observing the school environment, giving presentations to teachers and county level administrators, and setting up work areas.

Initial classroom activities were aimed at developing perceptual awareness: a description of Main Street; a description of a favorite place; an exercise called, "Try Finding;" a "blind" exploration of space; a people-watching exercise; and an imaginary time-travel trip to an ideal world. The latter was later developed and performed by the students of both schools as a puppet show.

As a first activity in environmental change, College Street students renovated their lockers, scraping, sanding and painting, then designing and applying their own logos.

Goggans conducted an introductory workshop for teachers. Out of this and other faculty meetings, it was decided that the residency should have clearly defined project as a goal. The project chosen for College Street was the construction of a playground/learning space; the project for Salem was the redesign of an existing hallway.

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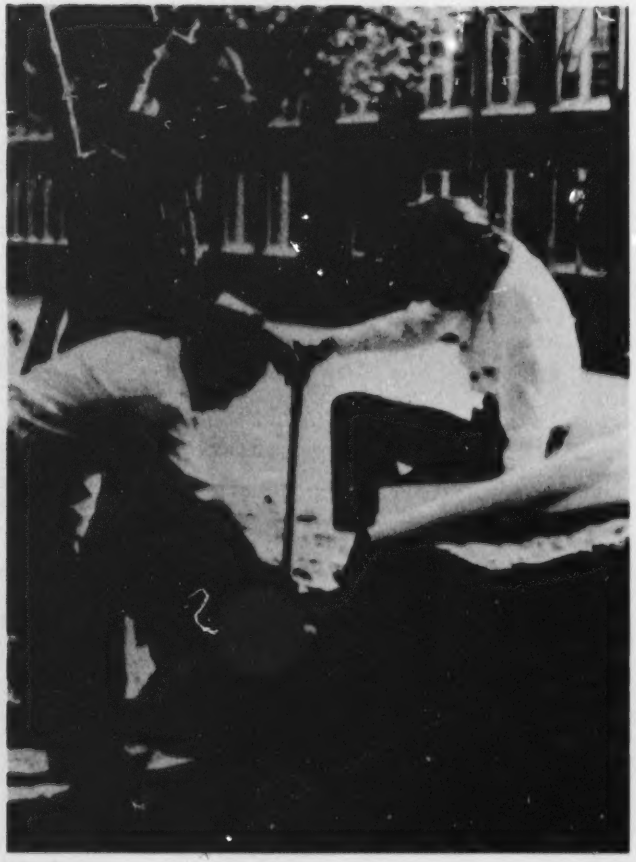

At College Street, the children mapped, described and drew various neighborhood areas and studied people's responses to their environment. The children then began a mapping exercise which resulted in a topographic map of the school grounds. This part of the project was tied into both science and math courses. The next phase gave the children the opportunity to discuss their needs and recommendations for the playground and consider the needs of teachers, administration and community as well. After the architect and his assistant drew up plans, steps were taken to begin construction. A core group of 25 students was formed; they would continue to help out over the summer months. Arrangements were made for a sculptor-in-residence to create a play sculpture for the playground during the summer.

The hallway redesign project at Salem was organized around the concept of the hallway as a main street. Children explored and discussed the school in terms of a space that had to meet definite needs and that could serve a variety of functions. Students drew and described their favorite places in the hallway and suggested improvements. They wanted the hallway to be a vibrant place. Although this project was never completed because of misunderstanding and lack of administrative support — it had become a construction project to be done by skilled craftsmen — it was, nevertheless, an educational process for the children.

In April, a workshop was held for teachers, administrators, students and community. Included in the workshop were space awareness exercises, construction of personal spaces, and a "Mystery Tour" of old buildings in the town. This aroused a great deal of interest in the historical aspect of built environment education and the possibility of this approach to next year's program.

Comment

This residency was unique because the state employed a consultant architect who successfully helped the Arts Council and the resident with planning.

Resident/Site

Architect-in-Residence:
Janet Felsten

Crockett Elementary School
Abilene, Texas

Site: Urban
Population: 350 students; 20 faculty
Grade level: K-6

In-School Coordinator:
Robert Gaines, Principal

Franklin Jr. High School
Abilene, Texas

Site: Urban
Population: 810 students; 50 faculty
Grade level: 7-9

In-School Coordinator:
LaShara Nieland, Life Sciences teacher

Lincoln Jr. High School
Abilene, Texas

Site: Urban

School System Coordinator:
Betty Lawrence, Planning and Staff Development Specialist

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Residency/Resources

This residency was divided among three schools; two days at Crockett for entire school year; two days at Franklin for four-and-a-half months; two days at Lincoln for remainder of residency.

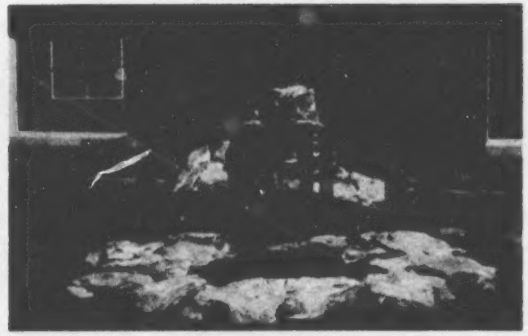
The resident worked with a teacher committee and individual teachers. The principal in one school was intensely involved in planning, enlisting parent and community support and physical labor. Parents were especially active in one school distributing a circular describing the project and requesting materials, tools and skills. In all schools the PTA was involved throughout the project. Fund raising activities were held in each of the schools: a pancake supper raised $1400.00; a candy sale another $2100.00. One of the schools received a Chamber of Commerce award for their project.

The local AIA supported the project and expressed interest in continuing their involvement with the program on a consultant basis after this residency is completed.

Program

In each of the three schools, activities were concentrated on a single project because the school's stated goals were to enhance and humanize their outdoor facilities — to create "people spaces."

The project undertaken by students, teachers and parents at Crockett was the design and construction of an outdoor learning center between the two wings of the school. Felsten presented an initial slide talk and encouraged brainstorming for ideas among all the students in the project. At Crockett, as elsewhere, the resident translated the suggestions into images on the spot. The children expressed their ideas through drawing and writing; teacher input was also solicited. During the spring, classroom gardens were planted; a "scenic" area with shrubs, waterfall, pond bridge and flagstone path was completed; a mural was painted; and a sandpit was built. Plans for development of the center during the following year include more garden space, further ornamental plantings, and the construction of an amphitheater and study areas.



At Franklin the architect-in-residence made herself known to the school during the first week by placing a poster, with self-portrait, in strategic places throughout the school. As in Crockett, she contacted and worked with students in initial brainstorming/slide presentation/plan-drawing sessions to elicit their ideas for development of the school courtyard. She then worked more intensively with a group of 40 students on more in-depth design procedures, keeping the school population informed by the use of highly visible graphics. Student plans for tables of their own design on brick paving were submitted to the principal but had not yet been approved or acted upon by the end of the residency.

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And in Lincoln, the arts and humanities classes worked on two short projects. The first was to draw up alternative plans for the area to the east of the school building, which the administration planned to blacktop. Because of the students' suggestions for change, future plans are to provide plants and seating in the area. The second project was the design and execution of a supergraphic for a wall in the school store.

In these activities certain learning objectives were fulfilled. In addition to working through the planning process itself, it appeared that students gained familiarity with metric system and measurements and were able to translate their ideas and data into words, sketches and statistics.

This resident also appeared on a local television show where she was interviewed about the Architects-in-Schools program. She also made a slide presentation to the Chamber of Commerce.

Comment

The resident comments:

Junior high school students appeared dubious about the opportunities to affect their school environment.

There were unexpected [and enthusiastic] responses from students when the 500 bricks for the outdoor area arrived. I was stopped in the hall: "I saw the *bricks!*"

Resident/Site

Architect-in-Residence:
Richard Abbruzzese

East High School
Salt Lake City, Utah

Site: Urban
Population: 2100 students
Grade level: 9-12

In-School Coordinator:
Allen Young, Drafting and photography teacher

Residency/Resources

This was a six-month residency with an average class size of 10 to 15 students. The resident met with his students five days per week, averaging 35 hours per week.

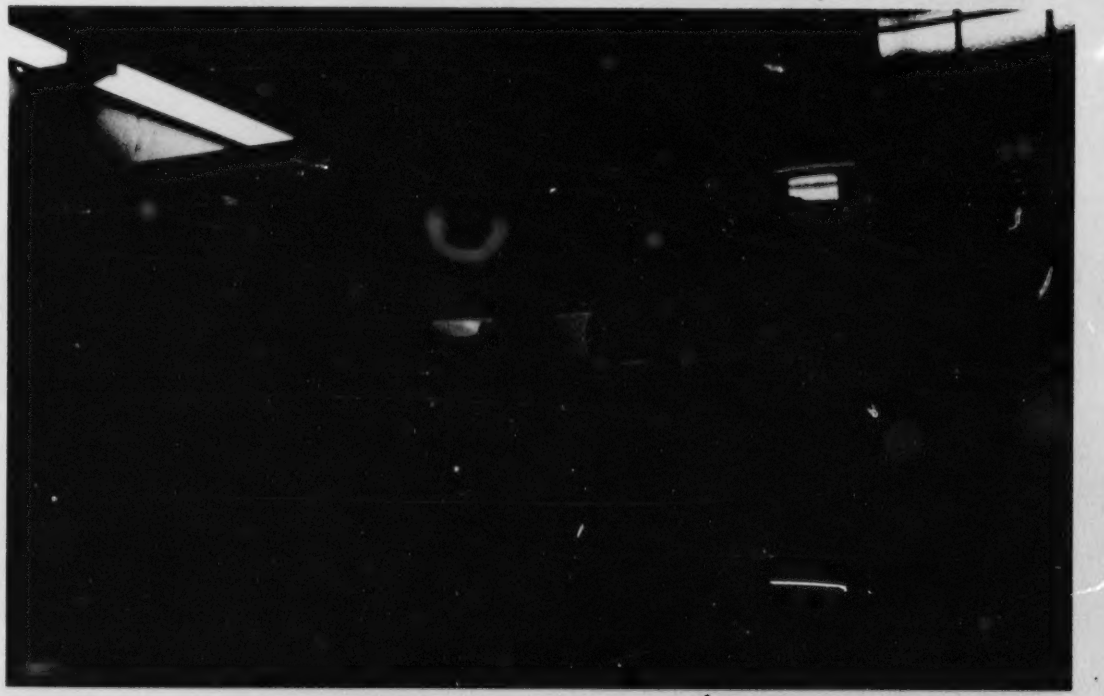
Abbruzzese worked with a group of volunteer drafting students, with alternate education students who met in two-and-a-half hour time blocks, and with students working in the pre-school program within the high school.

The University of Utah School of Architecture served as a resource. Several architectural offices, interior design firms, furniture stores, playgrounds and a restaurant welcomed students' visits. A plant retailer visited and gave advice on growing plants and trees in the classroom. A visiting graphic artist helped design and paint supergraphics.

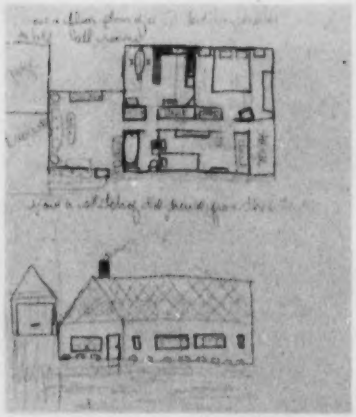
Program

The first project was designed to attract attention to the residency through visual impact. Six students volunteered to work on the physical development of a 23 x 28 ft. drafting room. Two-foot square display cubes were constructed from cardboard to create spatial dividers. The room was whitewashed and supergraphics were painted with the help of a visiting graphic artist. Plywood platforms to be used for seating, storage and display were developed for the center of the room.

The drafting class then turned its attention to designing outdoor play furniture for the pre-school class at the high school. The class explored sketching techniques from simple geometric forms, simple structures and architectural renderings. One of the drafting students did painting exercises with the pre-schoolers in order to learn more about these "clients," and finally three play cubes were developed.



An alternative education class was involved in changing the classroom. To develop a sense of their awareness of the built environment, activities included an evaluative tour of various campus spaces and two architectural scavenger hunts. A scale model of the room was built, graphics were designed and tested on the model. Eventual changes to the room included painting supergraphics on one wall and designing and building furniture. The furniture-building engaged the students in an analysis of function. Field trips (for example, to a Japanese restaurant), research in professional magazines, and an assessment of their own needs were part of their exploration. Full-scale mock-ups were built of cardboard and hollow-core doors. The students divided into groups; half built frames, half made cushions. Afterwards, students wrote about how they perceived the project; many were surprised at the results and pleased that they were successful. Future plans are for building a loft space in the classroom.



Comment

A teacher comments:

Success in thematic teaching forces the teacher to be creative, resourceful and productive. The unit on architecture has been a lesson for me as a teacher. My feeling is that of awe, and "ah-ha!" I have learned much.

Resident/Site

Architect-in-Residence:
Rengin Holt

William Fleming High School
Roanoke, Virginia

Site: Urban
Population: 1600 students; 90 faculty
Grade level: Secondary

In-School Coordinator: Cynthia L. Jones, Art teacher;

Patrick Henry High School
Roanoke, Virginia

Site: Urban
Population: 1670 students; 89 faculty
Grade level: Secondary

In-School Coordinator: Cam Booth, Art teacher

Project Coordinator: Leslie V. Willett, Supervisor of Art, Roanoke City Public Schools

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Residency/Resources

This was a six-month residency split between two schools, 18 hours per week. The resident was at William Fleming for two periods of time, November to February and for the month of April.

This resident worked with art, mechanical drawing and shop teachers.

Outside consultants included a visitor from the Virginia Polytechnic Institute School of Architecture who showed several architectural films; a visiting architect who showed slides relating fashion to the forms of a city; and the architect who was working on an addition to the William Fleming School who brought plans and explained his work.

A local lumber company contributed wood blocks for the model city project. Additional materials were supplied by local contractors, suppliers, faculty, students and parents.

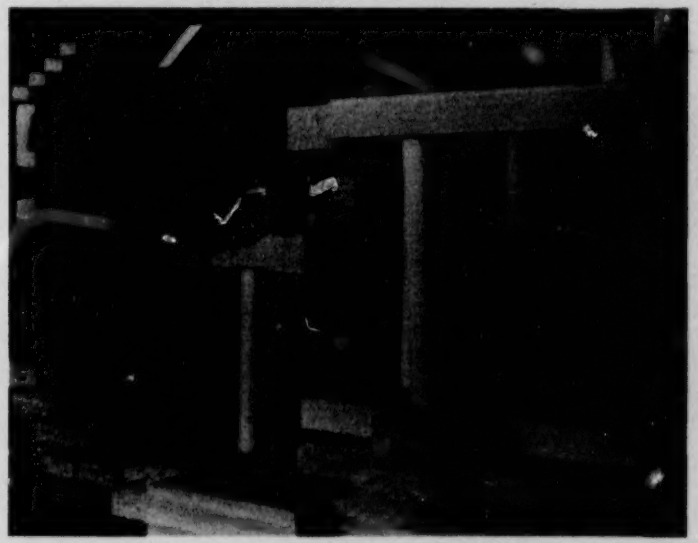
Program

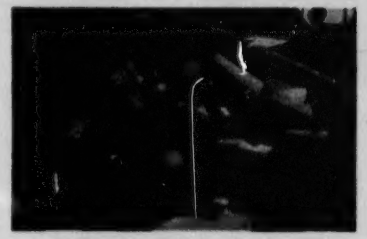
The resident selected a series of activities designed to lead the art students with whom she worked through stages of environmental awareness to finally creating a specific environmental change.

The first activity was an introduction to seeing the environment in terms of architectural elements and their different scales. Each student was asked to do an aerial design of his or her neighborhood by using abstract shapes and colors to map the various buildings, roads, boundaries and places.

The next activity allowed students to manipulate and reorganize the environment using bright, shiny paper cut into the symbols created in the previous exercise. Using this language, they constructed poster-like images of new cities or places.

The third activity was a group effort in three dimensional understanding of geometry, composition and environmental design elements. As a warm-up for this activity, the architect showed slides of different cities and those of models made by architectural students. Using thousands of modular wooden blocks (made by shop students) and glue, the students designed and constructed a model of a new city.





The last project was one of actual environmental change. Art students redesigned an outdoor area of the school to create a courtyard garden. After drawing their ideas and building models, they levelled the ground, laid bricks and put in plants.

Although the major portion of the residency was spent with art classes, the architect communicated with the other teachers through a bulletin she sent out. As a result, a language teacher asked her to speak to a class about German architecture. The architect assembled a slide show and presented it to the class. She also was asked to speak to the Art Club where she demonstrated the watercolor medium.

At Patrick Henry, the time allocated to the residency was brief. The main project was the reorganization of the art room. Students discussed the functions that took place there — ceramics, painting, drawing and so forth. They considered the space requirements of each and the storage needed for different supplies and materials. The students worked on the reorganization and painting. Here, as at the William Fleming School, the class worked on activities centering on their perception of urban design. The architect also worked with a mechanical drawing class using similar activities.

This AIS project was well-publicized locally. Student posters and models were exhibited at a downtown bank, and radio and television programs carried stories about the students' work.

The brick paved garden outside a wing of classrooms was passed by many students every day. They became aware that something unusual was going on, and that students were affecting a change — an attractive and functional one — in their own environment. The awareness created in the school community is a fundamental aspect of the AIS program.

The results of such exposure [AIS program] should enable the students to become more demanding and critical of their surroundings and perhaps lead them to seek better and more appreciative physical solutions in the next generation of built environments.

— *Roanoke Times & World News*

The resident comments:

All through the project I always worked with the students laying, carrying, helping, as well as supervising. I believe this to be very important for the students . . . that you are one of them.

Appendix Architects-in-Schools

Richard Abbruzzese
2945 E. 73-75 South
Salt Lake City, Utah 84121

Jerry Allen
Criteria Architects
100 N. 1st Street
Minneapolis, Minnesota 55401

Alan Anderson
Mead Pond Lane
Rye, New York 10580

Rodney Armstrong
Whiteside, Schults, Hammett
& Assoc.
4111 S. Darlinton Street
Southland Financial Center
Tulsa, Oklahoma 74135

Daniel Brown
748 Carroll Street
Park Slope
Brooklyn, New York 11215

Robert Close
2108 25th Avenue South
Minneapolis, Minnesota 55406

Harry Coccossis
4 Abbot Lane
Ithaca, New York 14850

Philip Danzig
86 Edgemont Road
Upper Montclair, New Jersey 07043

Janet Felsten
1234 N. 17th Street
Abilene, Texas 79601

Linda Fritz
349 Sage Hall
Cornell University
Ithaca, New York 14853

Thomas Goetting
Road 1 Box 406
Middletown, Delaware 19709

Steve Goggans
415 Key Avenue
New Ellenton, South Carolina 29808

Carol Goldstein
(see Coccossis-Goldstein residency)
130½ University Avenue
Ithaca, New York 14850

Nancye Green
(see Brown-Green residency)
808 Broadway
New York, New York 10003

Bruce Grulke
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Columbus, Ohio 43214

Ron Haase
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Littleton, New Hampshire 03561

Garry Harley
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Omaha, Nebraska 68137

Paul Heyer
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Regin Holt
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Blacksburg, Virginia 24060

John Meffert
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Ithaca, New York 14850

William Mikesell
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Clinton, New Jersey 08809

Jill Morelli
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Tulsa, Oklahoma 74105

Damon Ohlerking
1268 N. 7th Street
Fort Dodge, Iowa 50501

Jerry Ohsfeldt
P.O. Box 1893
Las Cruces, New Mexico 88001

Gary Olsen
910 West Springfield Avenue
Champaign, Illinois 61820

Eric Overland
1333 E. 17th Street
Tulsa, Oklahoma 74103

John Perry
3805 Northeast 18th Avenue
Portland, Oregon 97212

Thomas Pope
1221 Newton Street
Key West, Florida 33040

Russell Riley
82 Central Avenue
Wailuku, Maui, Hawaii 96793

Frank Santillo
5 Windward Avenue
White Plains, New York 10605

Debbie Snow
(see Heyer-Snow residency)
Fiedel School-Administrative Office
Glen Cove Campus
Lattingtown Road, Glen Cove
Long Island, New York 11542

Myrene Taylor
417 W. Mulberry Street
Kokomo, Indiana 46901

Richard Twiss
1624 Maine Street
Quincy, Illinois 62301

Carl E. Vogt
(see Close-Vogt residency)
The Environment Collaborative
10304 94th Avenue North
Osseo, Minnesota 55369

Neil Weber
Richard Schwarz/Neil Weber, Inc.
6950 France Avenue South
Minneapolis, Minnesota 55435

Steven Weeks
(see Weber-Weeks residency)
1112 7th Street Southeast
Minneapolis, Minnesota 55414

Howard Wolff
Humanvironments
149 2nd Street
Troy, New York 12180

Hettie Mary Worley
1710 Spring Street
Little Rock, Arkansas 72206

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In-School Coordinators

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